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TEXTS, STORMS, AND THE THERA ERUPTION*

KAREN POLINGER FOSTER, *Connecticut College*
ROBERT K. RITNER, *Yale University*

*Had the fierce ashes of some fiery peak
Been hurl'd so high they ranged about the globe?
For day by day, thro' many a blood-red eye . . .
The wrathful sunset glared.*

Tennyson, *St. Telemachus* (1892)

I. INTRODUCTION

TOWARD the end of the Aegean Bronze Age, after 15,000 years of quiescence, the volcano on the Cycladic island of Thera (Santorini) erupted with tremendous violence. Tons of volcanic debris completely buried the island's settlements. One of these, on the southern coast near the modern village of Akrotiri, was rediscovered in 1967.¹ As at Pompeii, thick ash deposits had effectively preserved a wealth of architecture, wall paintings, and small finds, giving rise to an important new field of Aegean Bronze Age art and archaeology. Prime among current Thera issues is debate over the eruption's absolute date, whose ultimate determination may have far-reaching historical implications.² Our inquiry offers a contribution to ongoing chronological discussions by suggesting that at least one datable text from Egypt recorded the effects of this cataclysmic eruption.

The Thera volcano lies midway along the Hellenic volcanic arc curving across the Aegean from the Saronic Gulf to the Anatolian coast just north of Rhodes. Beginning over

* An early version of this paper was given at the April 1994 Annual Meeting of the American Research Center in Egypt. We are grateful to many colleagues for suggestions and encouragement during the preparation of this study, particularly Benjamin R. Foster, Stephen L. Dyson, Martha Yellig, and Gregory A. Zielinski. The following special abbreviations are used:

- TAW I C. Dumas, ed., *Thera and the Aegean World I* (London, 1978).
TAW II Idem, ed., *Thera and the Aegean World II* (London, 1980).
TAW III: 2 D. A. Hardy, J. Keller, V. P. Galanopoulos, N. C. Flemming, and T. H. Druitt, eds., *Thera and the Aegean World III*, vol. 2, *Earth Sciences* (London, 1990).

- TAW III: 3 D. A. Hardy and A. C. Renfrew, eds., *Thera and the Aegean World III*, vol. 3, *Chronology* (London, 1990).

¹ For primary publication of the material, see S. Marinatos, *Excavations at Thera*, vols. 1–7 (Athens, 1968–76); Dumas, *Thera: Pompeii of the Ancient Aegean* (London, 1983); idem, *The Wall-Paintings of Thera* (London, 1992).

² Recent presentations of the relevant Thera evidence, with complete bibliography of previous work, include the Third Thera Congress papers in TAW III: 3; S. W. Manning, "The Thera Eruption: The Third Congress and the Problem of the Date," *Archaeometry* 32 (1990): 91–100; M. J. Aitken, H. N. Michael, P. P. Betancourt, and P. M. Warren, "The Thera Eruption: Continuing Discussion of the Dating," *Archaeometry* 30 (1988): 165–82; J. D. Muhly, "Egypt, the Aegean and Late Bronze Age Chronology in the Eastern Mediterranean," *Journal of Mediterranean Archaeology* 4 (1991): 235–47; and Manning, "Response to J. D. Muhly on Problems of Chronology in the Aegean Bronze Age," *Journal of Mediterranean Archaeology* 4

a million years ago, a dozen large-scale eruptions transformed Thera into an island the shape of a backwards C enclosing one or two calderas.³ Then, in the Late Bronze Age, the volcano exploded in one of the largest European eruptions of the past 100,000 years, fragmenting the northern part of the island and creating the present caldera. Extensive volcanological analyses, coupled with the latest findings in plate tectonics, have yielded general agreement on the sequence and magnitude of what occurred.⁴

II. THE BRONZE AGE ERUPTION

An earthquake, caused by plates shifting under the Aegean, probably set the Bronze Age eruption in motion.⁵ A few months to two years later, a small precursory ash fall heralded the dramatic, Plinian phase of the eruption, during which a column of pulverized magma shot 30 or 35 km into the air. The Aegean flowed into the crater and over the exposed magma in the vent, whereupon the eruption increased greatly in violence. Fresh volcanic material surged out laterally, succeeded by horizontal flows of gas-rich clouds laden with ash, pumice, and blocks. The entire eruption took eighteen hours at a minimum, more likely lasting several days. The accompanying atmospheric disturbances included periods of darkness, wind, lightning, rain, and deafening noise.

Of the 20 to 30 cu. km of ejecta, most was deposited locally. Winds and sea currents carried the rest eastward and southward, with significant accumulations (10–30 cm), as well as wave damage, mainly in the area of Kos, Rhodes, and the neighboring Anatolian coast.⁶ Probably the most serious wide-range environmental effect was a drop in surface temperature over much of the northern hemisphere, due to the volume of gases released into the atmosphere. This volcanic aerosol formed a stratospheric screen of sulphuric acid particles, which may have absorbed and reflected back solar radiation for as long as several years before dispersing.⁷ In addition, lower level filters of suspended silicate ash par-

(1991): 249–62. For absolute and relative chronology in the rest of the Aegean, see P. Warren and V. Hankey, *Aegean Bronze Age Chronology* (Bristol, 1989).

³ U. Eriksen, W. L. Friedrich, B. Buchardt, H. Tauber, and M. S. Thomsen, "The Stronghyle Caldera: Geological, Palaeontological and Stable Isotope Evidence from Radiocarbon Dated Stromatolites from Santorini," *TAW* III: 2, pp. 139–50.

⁴ See J. Keller's summary of the evidence presented at the Third Congress, *TAW* III: 2, p. 486, especially his remarks on remaining areas of disagreement.

⁵ For detailed descriptions of the main Thera eruption phases (Plinian, base surge, and ash flow), see H. Pichler and W. L. Friedrich, "Mechanism of the Minoan Eruption of Santorini," *TAW* II, pp. 15–35; F. W. McCoy, "The Upper Thera (Minoan) Ash in Deep-sea Sediments: Distribution and Comparison with Other Ash Layers," *TAW* II, pp. 57–78; D. M. Pyle, "New Estimates for the Volume of the Minoan Eruption," *TAW* III: 2, pp. 113–21; L. Wilson, "Energetics of the Minoan Eruption," *TAW* I, pp. 221–28, and "Some Revisions," *TAW* II, pp. 31–35.

⁶ H. Sigurdsson, S. Carey, and J. D. Devine, "Assessment of Mass, Dynamics, and Environmental

Effects of the Minoan Eruption of the Santorini Volcano," *TAW* III: 2, pp. 100–112.

⁷ Recent findings have called into question the traditional model of volcanic and other sulfate aerosols causing global cooling: R. J. Charlson and T. M. L. Wigley, "Sulfate Aerosol and Climate Change," *Scientific American* 270/2 (1994): 48–57. As for the Thera aerosol, the latest estimates vary on the amount of sulfur produced by the eruption, but it may have been relatively low per total volume of ejecta, like Katmai (1912) and Krakatau (1883) (Sigurdsson, Carey, and Devine, "Assessment" and Pyle, "New Estimates"). Manning cautions that these may be underestimates because the geological record is unlikely to preserve the highly soluble anhydrite, "which seems to be a key indicator of the high-sulphur content of the magma . . . [so] the true scale of the sulphur yield remains a mystery" ("Thera, Sulphur, and Climatic Anomalies," *Oxford Journal of Archaeology* 11 [1992]: 245–53). For general discussion of the many possible causes for global temperature drops, see H. and E. Stommel, *Volcano Weather: The Story of 1816, the Year without a Summer* (Newport, Rhode Island, 1983).

ticles produced visually impressive atmospheric phenomena for several years, particularly in Thera's general latitude.

Using a figure of 30 cu. km of ejected material, geophysicists have assigned this eruption a 6.9 on the Volcanic Explosivity Index (VEI), a logarithmic scale similar to the Richter one for earthquakes.⁸ The most comparable recent eruptions occurred in the Indonesian archipelago at Tambora in 1815 (VEI 7) and Krakatau in 1883 (VEI 6.3).

III. THERA OBSERVED

Many scholars have proposed that memories of the Thera eruption were preserved in later mythohistorical accounts, wherein composite descriptions of natural disasters usually served propagandistic, moralistic, or pseudohistorical purposes. Persistently cited texts with supposed Thera inspiration include: the Atlantis legend, the story of Deucalion and the flood, episodes in the tale of the Argonauts, the passages about the Phaicians' fate in the Odyssey, and Egyptian and biblical lamentations.⁹ Evaluation of whether or not the Thera eruption directly influenced these or any other literary remembrances is beyond the scope of this paper.

Instead, our interest here lies in identifying any surviving documentary evidence bearing on the Bronze Age eruption. Of greatest chronological value would be texts from the late seventeenth to the end of the sixteenth centuries B.C., the range within which the posited eruption dates fall. Unfortunately, there are almost no extant historical texts from this period, neither from Egypt nor Mesopotamia, the best potential sources for contemporaneous written records. In Egypt, this is the end of the Second Intermediate Period and the rise to power of the Theban brothers Kamose and Ahmose, who expelled the Hyksos and founded the Eighteenth Dynasty of the New Kingdom. In Mesopotamia, this is the end of the Old Babylonian period, with the Hittites' sack of Babylon about 1595 B.C. ushering in a century with almost no historical material.

Despite the paucity of contemporaneous documentation, we suggest that relevant texts do exist. In searching for them, we have been guided by three classes of textual and conceptual models: (1) detailed accounts of the analogous Tambora and Krakatau eruptions and their aftereffects, (2) reports on subsequent Thera eruptions, and (3) ancient Near Eastern observations of volcanoes and other remarkable natural phenomena.

After Tambora erupted on 10 April 1815, numerous far-flung correspondents reported unusual sights and sounds, though their connection with the eruption was often not recognized. Journals, ship's logs, and letters described such phenomena as midday darkness two days later and 500 km distant; detonations heard 1,600 km away; and severe earthquakes over a wide area.¹⁰ The following year was unusually cold and rainy, in New England the "year without a summer." Across the northern hemisphere, intensely colored sunsets caused comment for several years.

By the time of Krakatau's eruption on 27 August 1883, technological advances, especially in telegraphic communication and photography, had greatly improved the ability to coordinate worldwide observations of atypical phenomena. As a result, it was possible to

⁸ R. W. Decker, "How Often does a Minoan Eruption Occur?" *TAW* III: 2, pp. 444-52, with tabulated information on worldwide explosive eruptions.

⁹ See J. V. Luce, *The End of Atlantis: New Light on an Old Legend* (London, 1969), for concise discussion of the Platonic passages and other texts involved.

¹⁰ *Planet Earth: Volcano* (Alexandria, Virginia, 1982), pp. 58-60, with textual and visual documentation for Tambora's eruption. See also Stommel and Stommel, *Volcano Weather* for observations in New England.

collect an unprecedented amount of data on this eruption and its immediate aftereffects.¹¹ These included total darkness experienced for two days 160 km away; explosions heard 4,653 km across the Indian Ocean; sun and moon appearing blue and green through volcanic particle filters; and sunsets so vividly red that fire alarms were sounded in New England. Over the next three to five years, global temperatures dropped on the average $\frac{1}{2}^{\circ}$ C., while brilliant sunsets (Tennyson's "blood-red eye"), halos, coronas, and other atmospheric manifestations captured artistic and popular imagination.

No Thera eruptions in Classical and later periods approached the scale of the Bronze Age cataclysm. Nevertheless, accounts of these smaller eruptions provide a useful basis for extrapolation. In 197 B.C. "fires broke forth from the sea," the geographer Strabo wrote, "and continued for four days, so that the whole sea boiled and blazed."¹² The Byzantine chronicler Theophanes interpreted the A.D. 726 eruption as a sign of divine displeasure over Leo III's iconoclasm, since pumice reached the Macedonian and Anatolian coasts.¹³ The 1650 eruption occasioned reports of thunderous noises and fires visible from Crete.¹⁴ During a minor eruption in 1867, an English journalist on Crete saw smoke by day and fires by night along the northern horizon.¹⁵

Throughout the ancient Near East, careful attention was devoted to extraordinary natural phenomena,¹⁶ ranging from meteorites¹⁷ to oddly shaped flint nodules.¹⁸ As for volcanoes, the earliest known landscape, a wall painting from Çatal Hüyük, depicts a closely rendered Strombolian eruption with ash cloud rising above showers of spasmodically ejected bombs and blocks.¹⁹ Textual references to volcanoes and their attributes include such mentions as a "Starry Mountain" in the Khabur region, perhaps Kawkab, likely so named because of the way its lava flows emanate in a raylike pattern from its peak.²⁰

It follows that a volcanic event of Thera's magnitude should figure in Egyptian and Mesopotamian records. Study of the Tambora, Krakatau, and later Thera observations shows that we should not expect to find texts describing the actual eruption, but rather mention of one or more of the most spectacular volcanic aftereffects: daytime darkness, thunderous noises, atmospheric disturbances, and vividly colored skies, especially at sunset over a period of several years.

¹¹ See T. Simkin and R. S. Fiske, *Krakatau 1883: The Volcanic Eruption and Its Effects* (Washington, D.C., 1983), esp. pp. 154–59, 395–418, and color pls. 9–14, for descriptions and images of the atmospheric phenomena produced.

¹² Doumas, *Thera: Pompeii of the Ancient Aegean* (London, 1983), p. 15. The standard guide to Classical and later eruptions remains F. Fouqué, *Santorin et ses éruptions* (Paris, 1879).

¹³ Doumas, "Eruptions of the Santorini Volcano from Contemporary Sources," *TAW* I, pp. 819–20.

¹⁴ *Ibid.*, pp. 820–22.

¹⁵ S. Hood, "Traces of the Eruption Outside Thera," *TAW* I, p. 686.

¹⁶ Most recently on this, see D. J. W. Meijer, ed., *Natural Phenomena: Their Meaning, Depiction and Description in the Ancient Near East* (Amsterdam, 1992).

¹⁷ J. K. Bjorkman, *Meteors and Meteorites in the Ancient Near East* (Tempe, 1973).

¹⁸ B. J. Kemp, *Ancient Egypt: Anatomy of a Civilization* (London, 1989), p. 72 and fig. 24:9. One is reminded here of the hundreds of pumice lumps, each in

a conical cup, found with cultic paraphernalia at Nirou Khani, a Minoan site on the northern coast of Crete (Hood, "Traces," pp. 681–90); other evidence for pumice in Minoan cult comes from Zakro and Palaikastro.

¹⁹ J. Mellaart, *Çatal Hüyük: A Neolithic Town in Anatolia* (London, 1967), pp. 176–77 and pls. 59–60.

²⁰ A. Catagnoli and M. Bonechi, "Le volcan Kawkab, Nagar et problèmes connexes," *N.A.B.U.*, June 1992, pp. 50–53. We are grateful to Harvey Weiss for his description of Kawkab's present appearance as well as for reference to L. Dillemann's topographic guide to the volcanoes and other physical features of northern Mesopotamia: *Haute Mésopotamie orientale et pays adjacents* (Paris, 1962). Catagnoli and Bonechi's proposal to identify Sargonic Kakkaban with a settlement near Mt. Kawkab raises the possibility that the mountain itself could be a theophoric element in the name Ila-kabbabū, the father of Shamshi-Adad. For bibliography on this name and other instances of *kakkabu* in personal names, presumably simply meaning there "star," see I. J. Gelb, *Computer-aided Analysis of Amorite, As-*

IV. THE TEMPEST STELE OF AHMOSE

During the reign of Ahmose, founder of Egypt's Eighteenth Dynasty, a highly destructive storm occurred. To commemorate his reconstruction efforts, Ahmose erected a stele at Thebes, which was subsequently used as fill in the Karnak Temple's Third Pylon.²¹ On both sides of the stele, Ahmose recounts first the meteorological phenomena and devastations, then the restorations he undertook (see Appendix A, pp. 11–12 below). While sudden and violent storms were a recurrent feature in ancient Egyptian life and literature, only the Ahmose stele details such severe catastrophe: bellowing noise, darkness, torrent so that no torch could be lit, houses washed into the river and bobbing like boats, chapels, tombs, and temples damaged, collapsed, or reduced to "that which was never made" (l. 18). The remarkable nature of the event is stressed by the text itself, which attributes the disaster to divine displeasure (ll. 7–8), while yet declaring that it is greater than divine wrath and exceeds the gods' plans (l. 12).

Davis has drawn attention to the possible relevance of this text to the Thera eruption.²² Her reliance on Vandersleyen's original publication, however, has perpetuated his view of the storm as a localized Theban affair, which would rule out its being part of the Thera event. Vandersleyen based this interpretation upon his personal experience of typically localized storm patterns in modern Egypt.²³ Textual references that did not correspond to this interpretation were consciously emended in translation.

Three passages in the text explicitly extend the devastation to the entire country, not just the Theban area, and merit reconsideration in the light of the stele's potential importance as an eyewitness account of the aftereffects of the Thera eruption.

Line 12 *n šḥd.n tk³ ḥr t³.wy*

Ritner: "while a torch could not be lit in the Two Lands"

Vandersleyen: "sans qu'on puisse allumer de torche nulle part"

Davis: "with no one able to light the torch anywhere"²⁴

Although the text states explicitly that darkness extended to both halves of the Egyptian kingdom ("the Two Lands"), Vandersleyen chose to interpret the final phrase figuratively, despite the fact that *ḥr t³.wy* is not a standard Egyptian expression for "anywhere" (*bw nb*, *s.t nb.t*, etc.). Vandersleyen's critical note is instructive: "litt.: 'dans les deux terres'. Comme l'événement paraît très localisé et que la stèle est pauvre en hyperboles, la traduction explicite: 'dans toute l'Égypte' ne s'impose pas."²⁵ Here Vandersleyen has allowed

syriological Studies, no. 21 (Chicago, 1980), p. 304; H. B. Huffmon, *Amorite Personal Names in the Mari Texts: A Structural and Lexical Study* (Baltimore, 1965), p. 220. Sargonic and later northern Mesopotamian parallels for geographical features in Semitic name-giving have been discussed by W. G. Lambert, "The God Aššur," *Iraq* 45 (1983): 84–85. On the other hand, I. J. Gelb in L. Cagni, ed., *La lingua di Ebla* (Naples, 1981), p. 15, prefers "ʾIla (god) is his star."

²¹ C. Vandersleyen, "Une tempête sous le règne d'Amosis," *Revue d'Égyptologie* 19 (1967): 123–59 and idem, "Deux nouveaux fragments de la stèle d'Amosis relatant une tempête," *Revue d'Égyptologie* 20 (1968): 127–34.

²² E. N. Davis, "A Storm in Egypt during the Reign of Ahmose," *TAW* III: 3, pp. 232–35.

²³ Vandersleyen, "Une tempête," pp. 155–56.

²⁴ *Ibid.*, p. 133; Davis, "A Storm in Egypt," p. 232. For the common use of the preposition *ḥr* (literally, "on") in expressions for "in Egypt," see *Wb.* III, p. 131/28. In this and the following passages under discussion, textual commentary is limited exclusively to the few points of disagreement with published translations. For all other textual matters, the reader should consult the thorough analysis in the original publications by Vandersleyen.

²⁵ Vandersleyen, "Une tempête," p. 140, textual note 24.

his interpretation to determine his text, even while granting that the stele's literal wording is significant, being "poor in hyperbole."

Line 15 *wn-in hm=f hr smn.t t3.wy . . . hr smn.t s.t m hq.w . . .*

Ritner: "Then His Majesty began to re-establish the Two Lands . . . to provide them with silver. . . ."

While both Vandersleyen and Davis here retain the explicit mention of "the Two Lands,"²⁶ the former's critical note suggests that the reference should be an otherwise unattested designation of the "two banks" of the Nile at Thebes, "puisque les événements semblent assez localisés."²⁷

Line 18 *h̄.n wd.n hm=f srwd r.w-pr.w nty.w w3 r q̄m (?) m t3 pn r dr=f*

Ritner: "Then His Majesty commanded to restore the temples which had fallen into ruin in this entire land."

Again, Vandersleyen and Davis maintain the phrase "in this entire land," though its significance is denied in the critical apparatus.²⁸ As in line 12, the clear reference to the entire country is reinterpreted as an expression for "anywhere": "Étant donné le caractère très localisé des pluies d'orages en Egypte, *t3 pn r dr=f* doit représenter un adverbe général: 'partout', plutôt qu'une hyperbole étendant le désastre à toute l'Egypte."²⁹

Because Vandersleyen knew that contemporary storms are localized in Egypt, the real wording of the text seemed unacceptable hyperbole. In each of these three passages, however, this assumption has resulted in forced translations of quite common phraseology. Nothing in the text corroborates the supposedly "local" character of the storm. Since the king was en route to Thebes when the storm struck (l. 14) and the stele was subsequently erected in that city, it is hardly surprising that modern commentators would have fixed the tempest in that region. The recorded movements of the king in "Thebes and an area not far to the north" have been conflated with the assumed path of the storm. Thebes, however, is mentioned only once in the text. In contrast, the passages here re-analyzed specifically indicate the storm's widespread nature, occasioning meteorological disturbances (l. 12), damage (l. 18), and restoration (ll. 15, 18) throughout the entirety of Egypt. Such a situation would be well beyond common experience and would explain the otherwise unique phraseology of the stele and the motivation for its erection. The "hyperbole" of the Egyptian stele derives directly from the remarkable nature of the historical events that it details.³⁰

The widespread nature of these events further refutes a recent suggestion by Goedicke, who would link the storm with the Thera eruption but localize its effects in the eastern Delta on the basis of the disputed place where Ahmose is residing at the opening of the

²⁶ Ibid., p. 142; Davis, "A Storm in Egypt," p. 233.

²⁷ Vandersleyen, "Une tempête," p. 143, textual note 36.

²⁸ Ibid., p. 145; Davis, "A Storm in Egypt," p. 233. The term generally read *w3s*, "ruin," is here accompanied by a phonetic complement "*m*," indicating either a distinct term or an abusive spelling deriving from

q̄m, "electrum." For the reading, see *Wb.* V, p. 539 and the commentary in Vandersleyen, "Une tempête," p. 148, textual note 53.

²⁹ Vandersleyen, "Une tempête," pp. 148–49, textual note 54.

³⁰ Hyperbole is certainly encountered in royal monuments, but Egyptian hyperbole is typically stereo-

narration.³¹ Goedicke's suggestion that this represents the harbor of Avaris is otherwise untenable; a realignment of stele fragments places the supposed Delta locality of *Sdf*-*t3.wy*, "south of Dendera," in Upper Egypt.³²

A new mention of the text by Manning underscores the significance of our retranslation for a proper evaluation of the stele.³³ Relying upon inaccurate interpretation, Manning briefly dismisses the events of the text as purely Theban and thus lacking "direct association" with Theran events.³⁴ Further, he wrongly assumes that the references to flooding are related to the inundation and thus to distant storms in the equatorial monsoonal rainbelt.³⁵ As is now evident, the flooding was the direct result of unprecedented rainfall extending throughout all of Egypt itself.

Once the storm is recognized as a national catastrophe, in conformity with the Egyptian wording, the potential connection with the Thera eruption is greatly strengthened. This linkage is underscored by Ahmose's meteorological descriptions, including pervasive darkness, unusual skies, and tremendously loud noises. In addition, as part of his restoration efforts, he mentions replacing sacred items, reenclosing sanctuaries, and reerecting fallen statues and offering tables. These actions may imply that earthquakes were among other calamities surely listed in the now-missing portions of the stele. In our view, the Tempest Stele of Ahmose provides a near-classic eyewitness report of the effects of an eruption of Thera's magnitude.

V. MESOPOTAMIAN SOURCES

We know of no surviving, contemporaneous Mesopotamian counterpart to the Ahmose stele. There are, however, a number of references to atmospheric phenomena, which, we suggest, are entirely consistent with the spectrum of volcanic aftereffects, especially those lasting several years. They occur in Sumerian literary contexts from the end of the third millennium, in Akkadian omen collections of uncertain date, and in scattered Akkadian literary contexts (see Appendix B, pp. 12–14 below). The phenomena noted include: sunset skies fiery red, as though ablaze; lunar and solar halos;³⁶ and fiercely glowing skies associated with earthquakes, darkness, and storms. Though, for the most part, the omens treating atmospheric phenomena are from late periods, some may well bear witness to earlier events.³⁷ Unfortunately, it is not possible to link any observations

typed, employing customary clichés. In sharp contrast, the details recounted by the Ahmose stele are unique, and this very unconventionality lends credence to the historical validity of the text.

³¹ H. Goedicke, "The Chronology of the Thera/Santorini Explosion," *Ägypten und Levante* 3 (1992): 60–61.

³² W. Helck, *Historisch-biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie*, 2d ed. rev. (Wiesbaden, 1983), p. 104. Vandersleyen had initially suggested an identification with Deir el-Ballas; see idem, "Une tempête," pp. 151–53.

³³ S. W. Manning, *The Absolute Chronology of the Aegean Early Bronze Age* (Sheffield, 1995), Appendix 7, pp. 200–216.

³⁴ Ibid., pp. 205–6 and 214–15.

³⁵ Ibid., pp. 206 and 215. Contra Manning, p. 215, the loud noises are not "only symbolic."

³⁶ Translated from earlier Babylonian prototypes, similar omens describing the effects of lunar halos survive even in Demotic Egyptian texts of the second century A.D. (R. A. Parker, *A Vienna Demotic Papyrus on Eclipse- and Lunar-Omina* [Providence, 1959]).

³⁷ On this genre of omen texts, see J. Bottéro, "Symptômes, signes, écritures en Mésopotamie ancienne," in J. P. Vernant et al., *Divination et rationalité* (Paris, 1974), pp. 100–103; S. M. Moren, "The Omen Series Šumma Alu: A Preliminary Investigation," (Ph.D. diss., University of Pennsylvania, 1978); A. L. Oppenheim, *Ancient Mesopotamia: Portrait of a Dead Civilization* (Chicago, 1977), pp. 224–25. On the trustworthiness of using other genres of omen

of volcanic aftereffects, if such they be, with specific eruptions. We hazard further speculation, nevertheless, that embedded in some of these texts may lie records of the Thera eruption, which was, after all, the major volcanic event of its place and time.

In 197 B.C., Thera exploded again, less violently, occasioning mention by Strabo, Seneca, Plutarch, Pausanias, Eusebius, and other Classical authors, who seem to have based their accounts on now-missing eyewitness documents or on local oral traditions.³⁸ We propose that the Babylonian astronomical diaries may afford the only extant, contemporaneous record of the aftereffects of this eruption. In February and March of 197 B.C., Babylon experienced exceptional weather: storms, heavy rains, flooding of the Euphrates, dense fog, and solar and lunar halos.³⁹ Was the culprit Thera? If so, the diaries provide independent corroboration of the eruption date, hitherto fixed by three converging strands of textual evidence in the Classical sources.⁴⁰ More significantly from our point of view, the diaries apparently record volcanically produced atmospheric phenomena. This greatly strengthens the case for Mesopotamian observation of the aftereffects of the cataclysmic Bronze Age eruption.

VI. CHRONOLOGICAL IMPLICATIONS

The absolute date of the Thera eruption is still undetermined, with the two main contenders about a century apart. The later, so-called traditional date is based chiefly on ceramic sequences and Egyptian synchronisms, yielding 1500 B.C. as a *terminus ante quem*, and 1535–1525 B.C. currently deemed the most likely decade.⁴¹ The earlier, revi-

texts for historical purposes, see J. J. Finkelstein, "Mesopotamian Historiography," *Proceedings of the American Philosophical Society* 107 (1963): 461–72, wherein he argues (p. 463) that they "take precedence both in time and in reliability over any other genre of Mesopotamian writing that purports to treat of the events of the past." E. Reiner cautions that "such historical omens have their relevance for the Mesopotamian scene, yes, but as 'historiettes', not history" ("New Light on Some Historical Omens," in *Anatolian Studies Presented to Hans Gustav Güterbock on the Occasion of His 65th Birthday* [Istanbul, 1974], p. 261). J. Cooper goes further, asserting that most apodotes seem "historically groundless" ("Apodotic Death and the Historicity of 'Historical Omens'," in B. Alster, ed., *Death in Mesopotamia* [Copenhagen, 1980], p. 102, with full references to earlier scholarship on the issue); skeptical assessment also by M. Liverani in *Akkad, the First World Empire: Structure, Ideology, and Tradition* (Padua, 1993), p. 44.

³⁸ Fouqué, *Santorin*, pp. 1–6, with translations and discussion; see also n. 12 above.

³⁹ We are grateful to Robert Biggs for suggesting that we look at the diaries; Alice L. Slotsky kindly analyzed the records for volcano weather and discussed numerous points. For translations of the relevant entries, see A. J. Sachs and H. Hunger, *Astronomical Diaries and Related Texts from Babylonia* (Vienna, 1989), pp. 247–53 (SE 114). We should also note that the diary (SE 129) for the winter and early spring of

183 B.C. reports overcast skies followed by severe cold, perhaps caused by the eruption of the eponymous Vulcano in Italy.

⁴⁰ Evaluated in Fouqué, *Santorin*, pp. 1–6: (1) Strabo says the Rhodians "who were then in control of the sea" (ca. 197 B.C.) were the first to explore and build a temple on the new Thera island created by the eruption; (2) Plutarch regards the eruption and newly formed island as the fulfillment of an oracle foretelling unusual natural events when the Trojan descendants, i.e., the Romans, conquered their adversaries, in this instance the Macedonians, whose loss at the battle of Cynoscephalae in 197 B.C. put Greece under Roman control; and (3) Eusebius, who places the eruption in the third to fourth year of the 145th Olympiad, or 197 B.C. Of these linkages, neither Strabo's nor Eusebius's permits assignment of the eruption month. As for Plutarch's, the causal connection may have been compressed to fit his propagandistic purpose, since the Second Macedonian War began in 200 B.C., the first peace overture was early in 198 B.C., the decisive battle in 197 B.C., and the treaty passed by the Senate in 196 B.C. (M. Cary, *A History of Rome* [London, 1962], pp. 200–203). We thank Victor Bers for guidance in Classical matters.

⁴¹ P. Warren, "Further Arguments against an Early Date," *Archaeometry* 30 (1988): 176–79; Warren and Hankey, *Aegean Bronze Age Chronology*, p. 215; Muhly, "Chronology."

sionist date is based on data from radiocarbon and Aegean and East Mediterranean dendrochronological samples, ice-cores, bristlecone pine frost rings, and Northern Irish bog oak rings.⁴² These point with some consistency to the 1630–1620 B.C. decade for hemispherewide climatic disturbance and volcanic ash fall, putatively caused by Thera.⁴³

The complexity of the issue is well illustrated in the most recent survey by Manning, who acknowledges that on the basis of new calibration data “the whole mid-16th century B.C. is now more attractive to the radiocarbon ages known from Thera.”⁴⁴ Manning, however, prefers a seventeenth century B.C. date as the “working hypothesis,”⁴⁵ while admitting that “a lower, mid-16th-century-B.C. date for the eruption, and the close of the LMIA period, remains also as a reasonable possibility.”⁴⁶

The Tempest Stele of Ahmose may contribute to the ultimate resolution of this issue. According to high Egyptian chronology, Ahmose ruled 1550–1525 B.C.; low chronology puts him at 1539–1514 B.C.⁴⁷ As Vandersleyen has pointed out, the stele must have been carved before Ahmose’s year 22, since his name was written differently during the last three years of his reign.⁴⁸ Thanks to recent archaeological work at the Hyksos capital of Avaris (Tell ed-Daba^ca) in the eastern Delta, we may now be able to date more narrowly the stele and, in turn, the Thera eruption.

Between years 11 and 15, Ahmose destroyed the Hyksos palace, which had been built about 1560 B.C. New excavations have revealed that it had wall paintings with Aegean stylistic and iconographical features.⁴⁹ Hundreds of these fresco fragments have been recovered from a garden, scattered among debris accumulated from the time of Ahmose to the reign of Amenhotep II. Within the same post-Hyksos stratigraphic horizon, excavations

⁴² P. I. Kuniholm, “Overview and Assessment of the Evidence for the Date of the Eruption of Thera,” *TAW* III: 3, pp. 13–18, with complete references and evaluations of each category of data. Add now the latest Greenland ice-core: G. A. Zielinski et al., “Record of Volcanism since 7000 B.C. from the GISP2 Volcano-Climate System,” *Science* 264 (1994): 948–52 (suggested Thera date 1623 B.C., with caveats). The authors emphasize (951 and personal communication) that any matching between ice core sulfate concentrations and eruptions before 1 B.C. is tentative. M. Rose’s report that this new ice-core “has confirmed an early date” is overly optimistic and disregards the caveats noted above (“Revising Bronze Age Chronology,” *Archaeology* 48:1 [1995]: 20).

⁴³ Possible corroboration comes from the Chinese Bamboo Annals, which report in epigrammatic style odd atmospheric phenomena and summer frosts at the beginning of the Shang Dynasty; this linkage depends on taking 1620 B.C. as the fall of the preceding Xia Dynasty, and on attributing the abnormalities in China to the Thera eruption (K. D. Pang, “Three Very Large Volcanic Eruptions in Antiquity and Their Effects on the Climate of the Ancient World,” *Eos* 66 [1985]: 816). Certainly a major atmospheric disturbance took place in the early seventeenth century B.C., but it was not necessarily brought about by Thera. If the event was indeed volcanically induced and not, say, caused by fluctuations in sunspot activity, the culprit could even have been an eruption in the southern hemi-

sphere. Such is believed to be the case, for instance, with the A.D. 177 Greenland ice-core ash layers, borne there from New Zealand (Sullivan, “Santorini Volcano Ash”). Similarly, in A.D. 536–37, several chroniclers around the Mediterranean reported marked cold and strange atmospheric phenomena, but there are no known European or Near Eastern eruptions then. R. B. Stothers proposes that a volcano in Papua, New Guinea was responsible (“Mystery Cloud of A.D. 536,” *Nature* 307 [1984]: 344–45). On the problems in linking volcanism, climate change, and time, see T. Simkin, “Distant Effects of Volcanism—How Big and How Often?,” *Science* 264 (1994): 913–14.

⁴⁴ Manning, *Absolute Chronology*, p. 200.

⁴⁵ *Ibid.*, p. 214.

⁴⁶ *Ibid.*, and cf. p. 212: “equally likely or indeed more likely.”

⁴⁷ K. A. Kitchen, “The Basics of Egyptian Chronology in Relation to the Bronze Age,” in P. Åström, ed., *High, Middle or Low?: Acts of an International Colloquium on Absolute Chronology*, pt. 1 (Göteborg, 1987), pp. 37–55.

⁴⁸ Vandersleyen, “Deux nouveaux fragments,” p. 132.

⁴⁹ For initial publication of selected fresco fragments, see M. Bietak, “Minoan Wall-paintings Unearthed at Ancient Avaris,” *Egyptian Archaeology* 2 (1992): 26–28. On the historical and art historical implications of this material, see V. Hankey, “Egypt, the Aegean and the Levant,” *Egyptian Archaeology* 3 (1993): 27–29.

have also yielded numerous pieces of rounded pumice, shells, and snails, suggestive of water deposition. Elsewhere in the eastern Delta, cores have produced deposits of volcanic materials that correspond very closely with Thera ejecta in terms of age, size, index of refraction, and chemical composition.⁵⁰

Should analysis of the Tell ed-Daba^c pumice likewise point to its Thera origin, and should the Ahmose stele in fact describe the eruption's wake throughout Egypt, we could then date the Thera eruption and the stele between years 11/15 and 22 of Ahmose: 1539/35–28 B.C. (high) or 1529/24–17 B.C. (low).⁵¹ These dates fit neatly with traditional proposals for the eruption decade. There may even be support from the available radiocarbon data, inasmuch as graphing the probability density for the date reveals a peak at 1619 B.C. and another at 1530 B.C.⁵²

Epigraphic evidence may also favor a date near 1530 B.C. In year 22 of Ahmose, his treasurer Neferperet erected a stele to record the opening of a new quarry for extensive temple constructions throughout Egypt.⁵³ So late in Ahmose's reign, these building projects seem unlikely to have been part of his post-Hyksos program, but rather, we propose, prime among the countrywide restoration efforts hailed in the Tempest Stele (ll. 18–19).

VII. CONCLUSIONS

Many have posed this question: if the Thera eruption was so cataclysmic, why is there no mention of it in texts from neighboring literate areas? As many have answered, the problem is that in both Mesopotamia and Egypt, the eruption occurred inopportunistically during periods for which there is a dearth of historical documentation. Nevertheless, later Mesopotamian omen texts may provide us with indirect glimpses of the spectacular atmospheric phenomena that must have been engendered by Thera. More directly, Ahmose's Tempest Stele of about 1530 B.C., with its straightforward description of storms, darkness, noise, and damage throughout Egypt, may very well stand as an eyewitness account of the Thera eruption. If so, Ahmose not only expelled the Hyksos and founded the Eighteenth Dynasty, but also led Egypt through the greatest volcanic event of the Bronze Age world.

⁵⁰ D. J. Stanley and H. Sheng, "Volcanic Shards from Santorini (Upper Minoan Ash) in the Nile Delta, Egypt," *Nature* 320 (1986): 733–35.

⁵¹ Questionable evidence linking the storm to year 11 of Ahmose is found in the notations on the verso of the Rhind Mathematical Papyrus ("problem" 87, col. III). These dockets record unseasonable thunder and rain on two consecutive days at the very beginning of year 11 of an unnamed ruler, generally assumed to be the last Hyksos ruler Khamudi, less likely Ahmose. See Vandersleyen, *Les guerres d'Amosis*, Monographies Reine Elisabeth I (Brussels, 1971), pp. 34–40; Wolfgang Helck, *Historisch-biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie*, Kleine ägyptische Texte 5 (Wiesbaden, 1975), p. 78, no. 113; and cf. Charles Nims, *Thebes of the Pharaohs* (London, 1965), p. 199, n. 2 (references courtesy of E. Wente).

⁵² Michael and Betancourt, "Further Arguments for an Early Date," pt. 2 in "The Thera Eruption," fig. 3;

see also fig. 4, which charts the probability of the eruption's having occurred before 1550 B.C. (3 in 4) or after 1550 B.C. (1 in 4). At present, the available radiocarbon evidence exhibits "a greater degree of dispersion than one would wish," with a "trend to a date in the 17th century" rather than a statistically unequivocal result (C. Renfrew, "Summary of the Progress in Chronology," *TAW* III: 3, p. 242). Radiocarbon dates expected from material just beneath ash layers at Trianda and Mochlos, should those volcanic deposits prove to be of Thera origin, ought to produce much-needed clarification of the radiocarbon dating picture.

⁵³ Sethe, *Urkunden der 18. Dynastie*, *Urk. IV/1* (Leipzig, 1906), pp. 24–25; idem, *Urkunden der 18. Dynastie: Übersetzung zu den Heften 1–4* (1914; repr. Berlin, 1984), pp. 13–14; and see also S. Harvey, "Monuments of Ahmose at Abydos," *Egyptian Archaeology* 4 (1994): 5.

APPENDIX A

A NEW TRANSLATION OF THE TEMPEST STELE OF AHMOSE

Robert K. Ritner

This translation follows the revised text edition in Helck,⁵⁴ line numbers following the parallel version on the recto. A damaged scene shows the king, accompanied by a female figure, facing a lost image of Amon-Ra, and offering "foodstuffs, fresh vegetables, and everything that the earth produces."

- (1) [Long live the Horus "Great of Manifestations," He of the] Two Ladies "Pleasing of Birth," the golden Horus "Who Binds the Two Lands," King of Upper and Lower Egypt, Neb-pehty-ra, son of Ra, Ahmose, living forever. Now then, His Majesty came [. . .]
- (2) Ra himself had appointed him to be King of Upper Egypt. Then His Majesty dwelt at the town of Sedjefa-tawy
- (3) [in the district just to] the south of Dendera, while A[mon-Ra, Lord of the Thrones of the Two Lands was] in Thebes. It was His Majesty
- (4) who sailed south to offer [bread, beer, and everything good] and pure. Now after the offering [. . .]
- (5) then attention was given in [. . .] this [district (?)]. Now then, the cult image [of this god . . .]
- (6) as his body was installed in this temple while he was in joy.
- (7) Now then, this great god desired [. . .] His Majesty [. . .] while the gods declared their
- (8) discontent. The gods [caused] the sky to come in a tempest of r[ain], with darkness in the western region and the sky being
- (9) unleashed without [cessation, louder than] the cries of the masses, more powerful than [. . .], [while the rain raged (?)] on the mountains louder than the noise of the
- (10) cataract which is at Elephantine. Every house, every quarter that they reached [. . .]
- (11) floating on the water like skiffs of papyrus opposite the royal residence for a period of [. . .] days,
- (12) while a torch could not be lit in the Two Lands. Then His Majesty said: "How much greater this is than the wrath of the great god, than the plans of the gods!" Then His Majesty descended
- (13) to his boat, with his council following him, while the crowds on the East and West had hidden faces, having no clothing on them
- (14) after the manifestation of the god's wrath. Then His Majesty reached the interior of Thebes, with gold confronting(?) gold for this statue so that he (i.e., Amon-Ra) received that which he desired.
- (15) Then His Majesty began to reestablish the Two Lands, to drain the flooded territories without his [. . .], to provide them with silver, with
- (16) gold, with copper, with oil, and cloth of every bolt that could be desired. Then his Majesty made himself comfortable inside the palace (life! prosperity! health!).

⁵⁴ Helck, *Historisch-biographische Texte*, pp. 104–10.

- (17) Then His Majesty was informed that the mortuary concessions had been entered (by water), with the tomb chambers collapsed, the funerary mansions undermined, and the pyramids fallen,
- (18) having been made into that which was never made. Then His Majesty commanded to restore the temples which had fallen into ruin in this entire land: to refurbish
- (19) the monuments of the gods, to erect their enclosure walls, to provide the sacred objects in the noble chamber, to mask the secret places, to introduce
- (20) into their shrines the cult statues which were cast to the ground, to set up the braziers, to erect the offering tables, to establish their bread offerings,
- (21) to double the income of the personnel, to put the land into its former state. Then it was done in accordance with everything that His Majesty had commanded.

APPENDIX B

VOLCANIC PHENOMENA IN MESOPOTAMIAN SOURCES?

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The purpose of this note is to indicate possibilities of volcanic imagery in Mesopotamian sources, without going into the many problems presented by the passages cited. Even those who have never seen a volcanic eruption may have recourse to volcanic imagery and may, at a distance, transform figurative language derived from volcanic phenomena into terms more familiar from their own environment. For example, Sumerian laments, describing utter destruction of human settlement, refer to “(flaming) ‘potsherds’” (*šika bar₇-bar₇*) raining from the sky, “deep shadow(?) of a fiery glow(?)” (*izi gi₆-edin-na*), dust, abnormal darkness and light, and other phenomena suggestive of volcanic activity or its aftermath.⁵⁵ In these sources, “(flaming) ‘potsherds’ raining down” is usually interpreted as a hailstorm, but even if this proposal could be contextually correct, the origin of the topos may well be a description of volcanic activity that survived in Sumerian literature of the outgoing third millennium B.C. Although the Sumerian passages are far too early for the Thera eruption, they raise the possibility that the aftereffects of some earlier eruption left their imprint on Mesopotamian literature.

Halos around the sun and moon, strangely luminous formations, and the apparently delayed setting of the sun, all phenomena associated with volcanic activity, are amply attested in Mesopotamian sources, especially omen collections.⁵⁶ Omens of solar and lunar halos, for example, are well known from collections from Emar and Boğazköy, derived from Mesopotamian prototypes of early and mid-second millennium B.C.⁵⁷

⁵⁵ These passages have been discussed in brief by P. Michalowski, *The Lamentation over the Destruction of Sumer and Ur* (Winona Lake, Indiana, 1989), p. 79; P. Attinger, “Remarques à propos de la ‘Malédiction d’Accad’,” *Revue d’Assyriologie* (RA) 78 (1984): 117, with references to earlier discussions; see further, S. N. Kramer, *Lamentation over the Destruction of Ur*, Assyriological Studies, no. 12 (Chicago, 1940), p. 36,

ll. 188 ff.; CAD, s.v. *išhilšu*; and A. R. Millard, “The Sign of the Flood,” *Iraq* 49 (1987): 63–69.

⁵⁶ Bjorkman, *Meteors and Meteorites*, p. 123.

⁵⁷ M. Leibovici, “Un texte astrologique akkadien de Boghazköi,” *RA* 50 (1956): 15; D. Arnaud, *Recherches au pays d’Aštata Emar*, vol. 6, pt. 4 (Paris, 1987), nos. 651 and 653.

Two Akkadian words, *anqullu*, here translated “fiery glare,” and *ašqulālu*, here translated “fiery glow(?),” may, in some instances, refer to the aftereffects of volcanic eruptions, at some point visible in Mesopotamia.⁵⁸ It is usually impossible to date the references, even approximately, but rough dates for the manuscripts that preserve the passages quoted are provided here. The texts may or may not be centuries older than the manuscripts.

1. *Anqullu*, “fiery glare.” This was considered a major occurrence on the order of an eclipse or earthquake, as seen from the subscription of a ritual and prayer (MS eighth century B.C.): (Ritual and prayer to be performed when the king does something and there is) “either [an eclipse of the mo]n or of the sun or of Venus, or an obscurity(?) . . . or an earthquake or . . . or a fiery glare or a fiery glow(?). . . .”

The “fiery glare” could be connected with a brush or swamp fire, abnormal behavior(?) of wild and domestic animals, and catastrophic mud(?). It could be seen as having terrestrial or celestial origin, and could cover the whole sky, as in the following astrological omens, all portending public disaster (MS seventh century B.C.):⁵⁹

If a fiery glare of a brush/swamp fire overwhelms the land, the battle cry of a mighty enemy will surround the land.

If a fiery glare of wild beasts overwhelms the land, a rebellious king will be killed.

If a fiery glare of livestock overwhelms the land, the land will be weakened, public policy will be disrupted.

If a fiery glare of mud overwhelms the land, fall of kingship.

If a fiery glare of heaven overwhelms the land, fall of . . .

If a fiery glare of earth overwhelms the land, fall of . . .

If a fiery glare covers the face of the sky, the Lord will turn the temper of the land to wickedness, the gods will [] the fatherly responsibility of the land.

The fiery glare is clearly associated with falling stones in a seventh century B.C. oracle: “I (the god) rained stones of a fiery glare (= volcanic stones?) upon them.”

Fiery glare is associated with destructive wind in a poem that refers to events in the twelfth century B.C., though the manuscript dates to the Achaemenid period:

When the heavens(?) changed their appearance,

The fiery glare and destructive wind obliterated their faces,

Their gods were frightened off, they went down to the depths,

Whirlwinds, destructive wind engulfed the heavens.

Mesopotamian religious poetry of the first millennium B.C. associates the fiery glare and its related phenomena with both the sun (Shamash) and the god of thunder (Adad).

Whatever the interpretation of individual passages, the evidence is strongly in favor of seeing in *anqullu* a Mesopotamian word for the fiery glare seen in the sky, at least in some instances as a consequence of distant volcanic activity.

2. *Ašqulālu* “fiery glow(?).” The etymology of this word suggests something perceived as hanging from the sky. The word is attested in extispicy known from manuscripts of about the eighteenth century B.C., possibly preserving material of earlier date. Unlike the

⁵⁸ References to the original sources may be found in the CAD and AHw., s.vv. *anqullu*, *ašqulālu*.

⁵⁹ C. Virolleaud, *ACh Šamaš* 14.1 ff.

instances of “fiery glare” cited above, “fiery glow(?)” appears in apodoses of omens, suggesting an atmospheric term generalized, perhaps as a term for “disaster.” For example, “If the ‘diaphragm’ is white, a fiery glow(?) will sei[ze] the land,” or, “a fiery glow(?)” of (= a portent for) my army.” The phenomenon seems to be more localized and to have a more specific shape than “fiery glare,” as in the following omen: “If a fiery glow(?) hangs down from the sky as far as the middle of the sky, public policy will be disrupted” (MS seventh century B.C.). While these descriptions are consistent with the appearance of volcanic aftereffects, *ašqulālu* might also refer to other atmospheric phenomena, such as a tornado funnel⁶⁰ or noctilucent clouds formed by meteoritic dust.

One cannot yet point to Mesopotamian sources that could be associated with the Thera eruption. There is abundant evidence that Mesopotamians knew of volcanic phenomena. The earlier material, from the end of the third millennium, suggests a closer encounter than does the apparently later material centering around the “fiery glare” and its related phenomena. Therefore the Akkadian passages concerning the “fiery glare” seem the best possibility at present for recollections of Thera.

Postscript: while this article was in press, P. M. Warren kindly made available his ISIS Fellowship lecture, “The Minoan Civilisation of Crete and the Volcano of Thera,” *Journal of the Ancient Chronology Forum* 4 (1990–91): 29–39. In addition to providing a lucid review of all the classes and attendant problems of the chronological evidence, Warren also documents new and hitherto unpublished finds of stratified pumice in the Aegean (pp. 31–33). He discusses as well the recent radiocarbon analyses done by an Oxford team, whose conclusions point to a 70 percent likelihood of a seventeenth century eruption, 30 percent for a sixteenth century one (p. 33). As for the Tempest Stele, relying upon Davis/Vandersleyen, Warren understandably places the “devastating storm conditions around Thebes” (n. 42). It is to be hoped that our new treatment of the Ahmose stele will accord the storm its proper due as a meteorological event of far-reaching proportions, one of the major aftereffects, we strongly suspect, of the Thera eruption.

⁶⁰ U. Jeyes, *Old Babylonian Extispicy Texts in the British Museum* (Leiden, 1989), p. 154: “cyclone.”

A PERSEPOLIS FORTIFICATION SEAL ON THE TABLET MDP 11 308 (LOUVRE Sb 13078)*

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David Lewis in memoriam

I. INTRODUCTION

A seal commonly used to secure transactions in the Persepolis Fortification archive, PFS 7*, has now been identified in an impression preserved on an administrative tablet of Achaemenid date housed in the Louvre (Louvre Sb 13078).¹ The text of MDP 11 308 has been known for many years; the text and the seal impression, however, have

* This discovery was first made while preparing my Ph.D. dissertation on the sealings preserved on the Persepolis Fortification tablets; see my "Seal Workshops and Artists at Persepolis: A Study of Seal Impressions Preserving the Theme of Heroic Encounter Preserved on the Persepolis Fortification and Treasury Tablets" (Ph.D. diss., University of Michigan, 1988). I would like to thank Margaret Cool Root, whose generosity has made it possible for me to work on the Persepolis seal impressions. She has given inspiration now both as a mentor and a collaborator. Permission to publish the seal impressions on the Fortification tablets comes from the Oriental Institute of the University of Chicago. Over the years, the Persepolis Fortification Tablet Seal Project has received support from the National Endowment for the Humanities, the John Simon Guggenheim Memorial Foundation, Trinity University, and three units of the University of Michigan: the Kelsey Museum of Archaeology, the Office of the Vice President for Research, and the Horace H. Rackham School of Graduate Studies. I would also like to thank the Classics Department at Vassar College, where I completed preliminary drafts of this manuscript as the Carl Blegen Fellow. Charles Jones of the Oriental Institute of the University of Chicago has kindly provided the transliteration and translation of the text of MDP 11 308 and the seal inscription of PFS 7*. For this and his constant support in matters pertaining to Persepolis he has my deepest gratitude. Pierre Amiet and Béatrice André-Salvini of the Louvre kindly provided photographs of the Louvre tablet dis-

cussed here, gave permission for its republication, and provided additional archival information. Finally, I wish to thank Pierre Briant for his insightful comments on the manuscript and valuable bibliographical references. The photograph and drawing of PFS 7* were produced by me. For personal and geographical names in the Fortification archive, I have followed R. T. Hallock, *Persepolis Fortification Tablets*, OIP 92 (Chicago, 1969), pp. 663–776. The responsibility for errors in this text, however, rests with me.

The following abbreviations have been used throughout: PF = Persepolis Fortification tablet text published by Hallock, *Persepolis Fortification Tablets*; PFS = seal design preserved as impressions on the Persepolis Fortification tablets (* following a seal number indicates that the seal design carries an inscription; the seal designs are reconstructed from multiple impressions of the original seals (which do not survive) on the Fortification tablets. For the numbering of the Persepolis seals, see idem, *Persepolis Fortification Tablets*, pp. 78–81; M. B. Garrison and M. C. Root, *Persepolis Seal Studies: An Introduction with Provisional Concordances of Seal Numbers and Associated Documents on Persepolis Fortification Tablets 1–2087*, in press. The first fascicule of the publication of the seals preserved on PF 1–2087 is now in preparation: see Garrison and Root, *The Seal Impressions on the Persepolis Fortification Tablets: A Catalogue*, fasc. 1 *Images of Heroic Encounter*; PTS = Persepolis Treasury tablet seal type (as published in E. F. Schmidt, *Persepolis*, vol. 2, *Contents of the Treasury and Other Discoveries*, OIP 69 [Chicago, 1957], pp. 4–41); MDP = Mémoires de la Délégation en Perse; MDAI = Mémoires de la Délégation Archéologique en Iran.

¹ MDP 11 308 text, first published in V. Scheil, *Textes élamites-anzanites*, Quatrième Série, MDP 11

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never been the subject of detailed examination.² The purpose of this article is to bring notice to the collation of the seal impression on MDP 11 308 with PFS 7* from the Fortification archive. This discovery raises several issues which are explored in this article. The first issue is the question of the provenance of MDP 11 308. The second issue is the relationship of the text and the seal impression on MDP 11 308 with texts and seal impressions from the Persepolis Fortification archive. The third issue is the larger historical framework for administrative documents such as MDP 11 308 and the Persepolis Fortification tablets.

II. THE PROVENANCE OF MDP 11 308

In 1911 the great epigrapher V. Scheil published an important selection of Neo-Elamite tablets.³ He stated that tablets MDP 11 301–7 had been found “dessous les ruines de l’Apadana.”⁴ Of the provenance of the other tablets published with those from under the Palace of Darius in the section entitled “Petits Textes” (i.e., MDP 11 299, 300, 308, and 309), Scheil said nothing. He did mention, however, that MDP 11 309 “appartient seul à la série du Tome IX des Textes élam.-anzanites,” linking it with those tablets found in 1901 by de Morgan near the temple of Shutruk-Nahunte II on the “tell de l’Acropole” and published by Scheil in MDP 9.⁵

There exists no documentation in the archives of the French mission concerning the excavation or the exact provenances of tablets MDP 11 299, 300, 308. All three tablets were given Susa acquisition numbers in the Louvre. A Susa museum number in the Louvre does not guarantee, however, that the objects were actually excavated at Susa, since the French mission also sent material retrieved from places other than Susa to the Louvre.

The fact that MDP 11 299, 300, 308 were published by Scheil in association with the tablets from under the Palace of Darius has generally been interpreted (often tacitly) to mean that the tablets come from Susa but that their exact provenances from the site are not known.⁶ While there has been much discussion about the dates of the Neo-Elamite tablets of known provenance, little has been said concerning the dates or the provenances of MDP 11 299, 300, and 308.⁷

Beyond the lack of secure documentation on the excavation of MDP 11 308, two factors complicate any assumption that it was found at Susa. First, the text (contents of the text and the date formula) and the seal impression indicate that the tablet dates to the Achaemenid period. Documented excavations at Susa have yielded no inscribed administrative

(Paris, 1911), pp. 89, 101, no. 308, with a description of the seal impression. The seal impression was first published in photograph in L. Delaporte, *Musée du Louvre, Catalogue des cylindres, cachets et pierres gravées de style oriental*, vol. 1, *Fouilles et missions* (Paris, 1920), pl. 48 (no. S.569).

² The tablet was recently included in the Susa exhibition at the Metropolitan Museum of Art, New York; P. O. Harper, J. Aruz, and F. Tallon, *The Royal City of Susa: Ancient Near Eastern Treasures in the Louvre* (New York, 1992), p. 273, no. 191 (entry written by Matthew W. Stolper).

³ Scheil, *Textes élamites-anzanites*, MDP 11, nos. 299–309.

⁴ *Ibid.*, p. 89.

⁵ *Ibid.*, for the quote; see *idem*, *Textes élamites-anzanites (Textes de comptabilité)*, Troisième série, MDP 9 (Paris, 1907), for the Neo-Elamite tablets found near the small temple built by Shutruk-Nahunte II on the “tell de l’Acropole.”

⁶ See, for example, P. Amiet, “La glyptique de la fin de l’Elam,” *Arts asiatiques* 28 (1973): 3–32, esp. pp. 4–6.

⁷ For the Neo-Elamite tablets of known provenance, see the summary in my article “Seals and the Elite at Persepolis: Some Observations on Early Achaemenid Persian Art,” *Ars Orientalis* 21 (1991): 1–29 (n. 31 for the summary); M. W. Stolper, “Cuneiform Texts from Susa,” in Harper, Aruz, Tallon, *The Royal City of Susa*, pp. 259–60, 267–69 (nos. 187–88).

tablets of Achaemenid date; thus MDP 11 308 would be unique.⁸ Second, MDP 11 308 is closely related in several ways to texts found in the Persepolis Fortification archive: the ductus, syllabary, and shape of the tablet are identical; the transaction recorded in MDP 11 308 is also documented in the Fortification archive (J text); and, finally, the seal used on MDP 11 308 was also used at Persepolis (PFS 7*). Thus, there exists the possibility that MDP 11 308 is in fact from Persepolis, having been brought to Susa in modern times in order to sell it to the French mission. There also exists the possibility that MDP 11 308 was brought to Susa from another (unknown) site in southwestern Iran which has preserved texts similar to those from Persepolis.⁹

The question of the provenance of MDP 11 308 cannot be answered definitively, owing to the lack of documentation from the excavation. Despite the absence of Achaemenid administrative tablets from Susa and the clear association of MDP 11 308 with the Fortification archive from Persepolis, five factors (when taken together) suggest that the tablet may in fact have come from Susa.

(1) Scheil's commentary on MDP 11 299–309 is brief and vague. In general, the early publications of the French mission do not provide exact and detailed information on archaeological context. That there is no information on the find-spot of this small, unassuming tablet does not come as a particular surprise, since often little is known of the provenances of even large and important monuments found at Susa.¹⁰

(2) MDP 11 308 is published in a work devoted to objects from Susa. It is, moreover, published in direct numerical sequence with tablets clearly identified as coming from Susa (i.e., MDP 11 301–7 and MDP 11 309). This might suggest that MDP 11 308 was also found at Susa.¹¹

(3) There was probably little, if any, illicit digging and uncovering of tablets at Persepolis before the Oriental Institute excavations in the 1930s, since, at that time, there were no known texts of this type and hence no incentive to market them. Since there was no market for this type of artifact, it seems unlikely that MDP 11 308 was taken from Persepolis (thirty years before excavations had even begun there), or any other site in southwestern Iran and subsequently brought to Susa, sold to the French mission, and sent to Paris with the Susa material. Moreover, at Persepolis tablets discovered in controlled excavations have always been found in large groups. If MDP 11 308 had been illicitly taken from Persepolis, other tablets would likely have been found with it and sold to the French mission.

⁸ There are a few known legal texts (written in Akkadian) of Achaemenid date from Susa: M. Rutten, "Tablette no. 4," in R. Ghirshman, *Village perse-achéménide*, MDP 36 (Paris, 1954), pp. 83–85; F. Joannès, "Contrats de mariage d'époque récente," *Revue d'assyriologie (RA)* 78 (1984): 71–81; idem, "Textes babyloniens de Suse d'époque achéménide," in F. Vallat, ed., *Contribution à l'histoire de l'Iran: Mélanges offerts à Jean Perrot* (Paris, 1990), pp. 173–80.

⁹ The texts from the Fortification archive indicate that there are numerous administrative, political, and religious centers lying between Persepolis and Susa; see, for example, H. Koch, *Verwaltung und Wirtschaft im persischen Kernland zur Zeit der Achämeniden*, Beihefte zum Tübinger Atlas des Vorderen Orients 19

(Wiesbaden, 1990).

¹⁰ As a reading of the catalogue entries in Harper, Aruz, Tallon, *The Royal City of Susa*, quickly reveals.

¹¹ B. André-Salvini, Conservateur at the Département des Antiquités Orientales at the Louvre, has informed me (personal communication, 31 July 1992) that, in her opinion, if Scheil had any doubts concerning the provenance of MDP 11 308, he would have published the tablet in *RA*, rather than in *MDP*. She adds that Scheil would have been present at the excavation most of the time from 1903 on, that he followed the discoveries very closely, and that he would have been aware of the purchase or import of an object by the mission from outside.

(4) The text of MDP 11 308 also yields possible evidence for its origin at Susa. As will be discussed in more detail below (pp. 20–25), the text records deliveries at and around Susa. The Persepolis Fortification texts, to which MDP 11 308 is clearly related, only rarely document actual deliveries at Susa, since the city lay beyond the administrative boundaries of the Fortification archive.¹²

(5) It seems very likely that administrative archives connected with the imperial state would have existed at Susa. The importance of Susa to the Archaemenid Persians, and especially to Darius the Great, cannot be overestimated. In our Greek and biblical sources, Susa figures as the main capital of the empire, and the city experienced a golden age of prosperity under Achaemenid rule.¹³ It was located at the heart of the empire, better positioned strategically than any other of the capitals. It also lay at one end of one of the most famous roads in antiquity, the royal road from Susa to Sardis (e.g., Herodotus 5.52–53). The three versions of the foundation charter of Darius's palace at Susa (DSf, written in Old Persian, Akkadian, and Elamite, respectively) describe the mobilization of resources from all over the empire for the construction of the palace, suggesting an elaborate administrative infrastructure.¹⁴ Finally, Susa has revealed an anepigraphic tablet which carries an impression of an Achaemenid seal; this tablet was most likely an administrative document of some type.¹⁵

¹² As can be reconstructed from textual evidence (for example, geographical names, movements of officials, etc.) preserved in the texts from the Fortification archive; Koch, *Verwaltung und Wirtschaft*, passim, recognizes six administrative regions represented in the Fortification archive: Persepolis (I), Shiraz (II), South-eastern Region (III), Southwestern Region (IV), North-western Region (V), and Elam (VI). Texts mentioning commodities delivered at Susa: PF 88, 90–92, 136, 318, and 737 (see n. 75 below for more discussion on the context of this text).

¹³ Darius clearly recognized the political and symbolic significance of Susa. He fortified the site, started a grandiose building program, and made it his lowland capital. He built on the so-called tell de l'Apadana a palace, an Apadana, and a monumental gateway. A royal treasure was also kept on the site (Herodotus 5.49; Diodorus 17.66.1). The date of Darius's building activity at Susa cannot be determined with precision. Some have argued for a date very early in Darius's reign, 521–520 B.C. and so a few years before Darius began to build at Persepolis (the construction date of which is also uncertain); for a brief summary with bibliography, see O. W. Muscarella in Harper, Aruz, Tallon, *The Royal City of Susa*, pp. 216–19. P. de Miroschedji, "Susa," in D. N. Freedman et al., eds., *The Anchor Bible Dictionary*, vol. 6 (New York, 1992), pp. 242–45, nicely summarizes the layout of the Persian city and the major buildings.

¹⁴ Standard English edition of DSf Old Persian text: R. G. Kent, *Old Persian: Grammar, Texts, Lexicon*, AOS 33 (New Haven, 1953), pp. 142–44 (DSf); with additions in M.-J. Steve, "Inscriptions des Achéménides à Suse (suite)," *Studia Iranica* 3 (1974): 135–61 (pp. 145–47, for the Old Persian) and idem, *Nouveaux mélanges épigraphiques: Inscriptions royales de Suse*

et de la Susiane, MDAI 53 (Nice, 1987), pp. 64–71 (no. 29). Standard editions of the Akkadian version: idem, "Inscriptions des Achéménides à Suse," pp. 155–61; idem, *Nouveaux mélanges épigraphiques*, pp. 72–77 (no. 29). Standard editions of the Elamite version: F. Vallat, "Deux inscriptions élamites de Darius Ier (DSf et DSz)," *Studia Iranica* 1 (1972): 8–11. Closely similar to DSf are DSz (Elamite version) and DSaa (Akkadian version); see idem, "Deux inscriptions élamites de Darius Ier (DSf et DSz)"; Steve, *Nouveaux mélanges épigraphiques*, pp. 79–82 (no. 32), gives an edition of the DSz Old Persian version and a fragmentary exemplar of the DSz Elamite version; Vallat, "Table accadienne de Darius Ier (DSaa)" in L. de Meyer, H. Gasche, and F. Vallat, eds., *Fragmenta Historiae Elamicae: Mélanges offerts à M. J. Steve* (Paris, 1986), pp. 277–83, for an edition of DSaa and comments on its relationship to DSf; Margaret Cool Root, *The King and Kingship in Achaemenid Art: Essays on the Creation of an Iconography of Empire*, *Acta Iranica* 19 (Leiden, 1979), pp. 7–10, for caveats concerning the propagandistic overtones of the foundation charter.

¹⁵ Amiet, *Glyptique susienne des origines à l'époque des Perses achéménides: Cachets, sceaux-cylindres et empreintes antiques découverts à Suse de 1913 à 1967*, MDAI 43 (Paris, 1972), no. 2203. The tablet carries the impression of only one seal and is roughly similar to thousands of anepigraphic sealed tablets found in the Persepolis Fortification archive (almost half of the Fortification archive consists of anepigraphic documents which carry only seal impressions; only one of these documents has ever been published: C. G. Starr, "A Sixth Century Athenian Tetradrachm Used to Seal a Clay Tablet from Persepolis," *Numismatic Chronicle* 136 [1976]: 219–22).

These considerations suggest that Achaemenid administrative archives would have existed at Susa.¹⁶ These archives are likely to have been kept in Elamite, the language overwhelmingly preferred in the later second millennium B.C. and the first half of the first millennium B.C. for the recording of administrative matters, royal inscriptions, etc., in Susiana.¹⁷

Given the likelihood of Achaemenid administrative archives at Susa, at first glance it may seem surprising that only one anepigraphic sealed tablet has been found.¹⁸ In fact, the recovery of administrative tablets from any site is remarkable, since most administrative tablets have a limited period of usefulness. Being made of clay, administrative tablets have no intrinsic value after the information conveyed in the text is outdated or no longer needed; thus they are easily recycled or destroyed. On multiperiod sites the chances of administrative records of earlier periods being preserved are further reduced, since later building activity tends to remove earlier buildings and occupational levels. The site of Susa saw extensive construction in post-Achaemenid times, resulting in the destruction of many Achaemenid buildings and the displacement of many Achaemenid artifacts from their original contexts.¹⁹ The archaeology of Achaemenid Susa is full of many unanswered questions.²⁰ Given the nature of the recovery of administrative tablets, the destruction of Achaemenid levels and buildings in post-Achaemenid times, and the haste of early excavations, it is, in fact, surprising that the site has yielded any administrative tablets of Achaemenid date.²¹

In summary, there exists no hard evidence in the form of excavation records for the provenance of MDP 11 308. Because the tablet was published in MDP in 1911 (well

¹⁶ Whatever the date of Darius's building program at Susa, he surely would have used the city as an administrative center from the very beginning of his reign, and so administrative recording on the site would have begun as soon as Darius took control.

¹⁷ Note the comments of Stolper, "Cuneiform Texts from Susa," in Harper, Aruz, Tallon, *The Royal City of Susa*, pp. 256–60. The seven legal texts found under the Palace of Darius (Scheil, *Textes élamites-anzanites*, MDP 11, nos. 301–7) and the 299 administrative texts found near the temple built by Shutruk-Nahunte II on the "tell de l'Acropole" (idem, *Textes élamites-anzanites*, MDP 9) establish the existence of record-keeping in Elamite in the period preceding Achaemenid rule at Susa. The administrative texts also use a number of phrases and features found in the Fortification archive and were apparently written at Susa (the majority of them at least) and also at other places, including points as far east as Hidali (see the summary in Stolper, "Cuneiform Texts from Susa," pp. 259–60, and the catalogue entries nos. 187 and 188 in Harper, Aruz, Tallon, *The Royal City of Susa*). The exact dating of these two sets of tablets in the Neo-Elamite II period cannot be fixed; see Amiet, "La glyptique de la fin de l'Elam," pp. 3–32; P. de Miroschedji, "Notes sur la glyptique de la fin de l'Elam," *RA* 76 (1982): 51–63; idem, "La fin du royaume d'Anšan et de Suse et la naissance de l'empire perse," *Zeitschrift für Assyriologie* 75 (1985): 265–306; Steve, "La fin de l'Elam: à propos d'une empreinte de sceau-cylindre," *Studia Iranica* 15 (1986): 7–21; E. Carter and M. W. Stolper, *Elam: Surveys of*

Political History and Archaeology, University of California Publications, Near Eastern Studies 25 (Berkeley and Los Angeles, 1984), pp. 44–56; W. Hinz, "Elams Übergang ins Perserreich," in *Transition Periods in Iranian History*, *Studia Iranica*, Cahier 5 (Paris and Louvain, 1987), pp. 125–34; J. Bollweg, "Protoachämenidische Siegelbilder," *Archäologische Mitteilungen aus Iran (AMI)* 21 (1988): 53–63; see my article "Seals and the Elite at Persepolis," pp. 3–4.

¹⁸ See n. 15 for the reference to the anepigraphic tablet from Susa.

¹⁹ For example, the inscribed column bases of Artaxerxes II (found across the Shaur River), the stone reliefs from the "tell de l'Apadana," and the stone reliefs from Artaxerxes II's apadana were not found *in situ*.

²⁰ For example, not one Achaemenid structure or inscription at Susa can be related to Cyrus the Great (despite the fact that he must have controlled the city); evidence to date exists for building activity by only two kings, Darius I and Artaxerxes II (despite the fact that the city remained a capital city for the entire period of Achaemenid rule); no domestic buildings or workshops have been found (despite the fact that these kinds of structures must have existed).

²¹ The Persepolis Fortification archive itself was a chance discovery. It was uncovered when the American excavation, needing an entrance for motor vehicles onto the terrace platform, decided to clear a road through the fortification wall.

before a market for such tablets existed), records a transaction at Susa (a rarity in the Fortification archive), and because of the *a priori* historical likelihood of administrative archives at Susa in the Achaemenid period, in my opinion, MDP 11 308 was deposited at Susa in antiquity and then found there in modern times.

III. THE TEXT OF MDP 11 308 AND RELATED TEXTS FROM THE PERSEPOLIS FORTIFICATION ARCHIVE

Scheil's transliteration of MDP 11 308 contained some errors, but in the absence of any comparable texts a better edition was not possible at the time. R. T. Hallock provided a corrected transliteration and a translation in his volume on the Elamite texts from the Persepolis Fortification archive, and Charles Jones has recently made a few more corrections.²² I give here Jones's transliteration and translation:

- (1) 64 [mar]-ri-
- (2) iš GIŠ.Ī^{MEŠ}
- (3) ra-mi UDU.NITÁ^{MEŠ}-
- (4) na kur-mín^{HAL}maš-
- (5) te-tin(?)-na-na
- (6) ^{HAL}EŠŠANA ti-ib-
- (7) ba ma-ak-ka₄
- edge (8) ^{AŠ}šu-šá-an a-ak
- (9) 5 ^{AŠ}ú-ma-
- rev. (10) nu-iš ha-tu₄-
- (11) ma ^{AŠ}be-ul 22-
- (12) um-me-na

64 marriš (of) fine? animal fat, supplied by Maštetinna, was dispensed on behalf of the king, at Susa and 5 villages, in the twenty-second year.

The unnamed king in the text is Darius I, whose twenty-second year is 500/499 B.C. The tablet is oval with a flattened left edge (figs. 1–5). String holes appear at the left corners, a feature commonly found on tablets of this size and shape in the Persepolis Fortification archive, the Persepolis Treasury archive, and on other Achaemenid Elamite administrative tablets. The same seal has been applied once upon the left edge, once upon the reverse and once upon the upper edge (figs. 3–5).

As mentioned, the text of MDP 11 308 is very similar to texts from the Persepolis Fortification archive.²³ The texts from the Fortification archive number into the thousands,

²² Hallock, *Persepolis Fortification Tablets*, p. 25. Charles Jones has kindly reedited the text from photographs provided by the Louvre.

²³ Two large administrative archives of Achaemenid date have been found at Persepolis: the Persepolis Fortification tablets and the Persepolis Treasury tablets. The readable Treasury tablets, numbering 129, document the payment of silver in lieu of foodstuffs to work groups in the Persepolis area during the years 492 to 458 B.C. For the texts, see G. G. Cameron, *Persepolis*

Treasury Tablets, OIP 65 (Chicago, 1948); idem, "Persepolis Treasury Tablets Old and New," *JNES* 17 (1958): 161–76; idem, "New Tablets from the Persepolis Treasury," *JNES* 24 (1965): 167–92; W. Hinz, review of Cameron, *Persepolis Treasury Tablets*, in *ZA* 40 (1950): 347–53; idem, "Zu den Persepolis-Täfelchen," *ZDMG* 110 (1960): 236–51; Hallock, "New Light from Persepolis," *JNES* 9 (1950): 237–552; idem, "A New Look at the Persepolis Treasury Tablets," *JNES* 19 (1960): 90–100. For the seal impressions, see Schmidt,

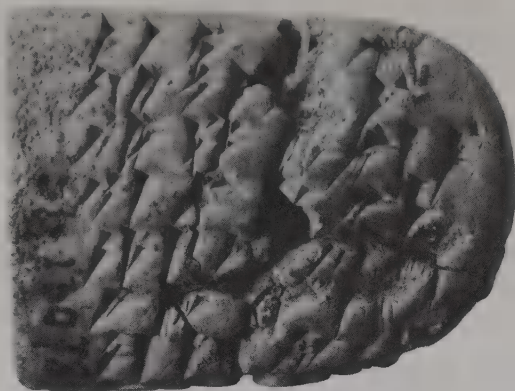


FIG. 1.—Obverse of MDP 11 308 (Louvre Sb 13078). Photograph courtesy P. Amiet and B. André-Salvini, Musée du Louvre.

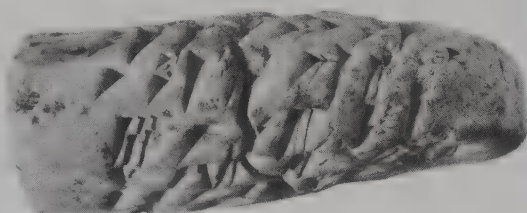


FIG. 2.—Lower edge of MDP 11 308 (Louvre Sb 13078). Photograph courtesy P. Amiet and B. André-Salvini, Musée du Louvre.

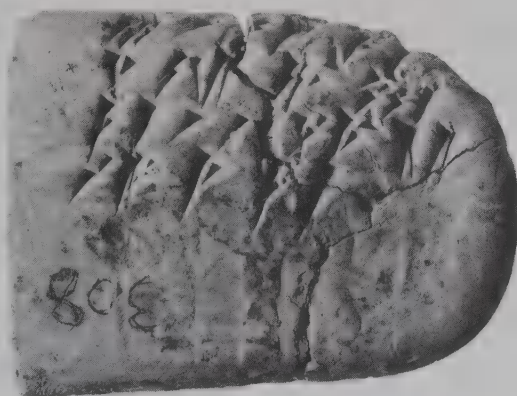


FIG. 3.—Reverse of MDP 11 308 (Louvre Sb 13078) showing seal impression of PFS 7*. Photograph courtesy P. Amiet and B. André-Salvini, Musée du Louvre.

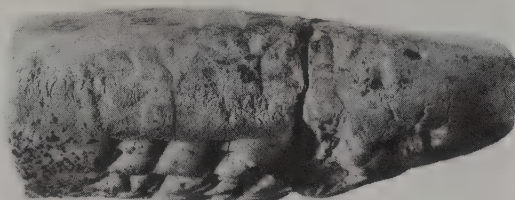


FIG. 4.—Upper edge of MDP 11 308 (Louvre Sb 13078) showing seal impression of PFS 7*. Photograph courtesy P. Amiet and B. André-Salvini, Musée du Louvre.

and stand as the primary source for understanding some administrative practices in the vicinity of Persepolis in the early years of the empire.²⁴ They record disbursements of foodstuffs from royally controlled storehouses in parts of Fars and Khuzistan, the Achaemenid districts of Persis and Elam, to agricultural workers, administrators, artists, courtiers, priests, and members of the royal family during the years 509 to 494 B.C. The tablets often carry one or more seal impressions of offices and officials mentioned or implied in the texts. Hallock published 2,120 of the texts.²⁵

The text of MDP 11 308 fits nicely into Hallock's category J (texts dealing with royal provisions) in the Fortification archive.²⁶ These texts are distinguished by the phrase

Persepolis, vol. 2, pp. 4–41 and pls. 1–14; Edith Porada, review of Schmidt, *Persepolis*, vol. 2, in *JNES* 20 (1961): 66–71; see my "Seal Workshops and Artists in Persepolis," pp. 172–78. Both the Treasury and Fortification archive were recorded almost exclusively in Elamite. The Fortification archive contains in addition one tablet in Greek (J. M. Balcer, review of J. Hofstetter, *Die Griechen in Persien*, in *Bibliotheca Orientalis* 36 [1979]: 276–80) and approximately 700 monolingual Aramaic texts. Found with the Fortification tablets were a tablet inscribed in Phrygian (J. Friedrich, "Ein phrygischen Siegel und ein phrygischen Tontäfelchen," *Kadmos* 4 [1965]: 154–56; O. Haas, "Die phrygischen Sprachdenkmäler," *Balkansko Ezikoznie* 10 [1965]: 176) and one in Babylonian (Stolper, "The Neo-Babylonian Text from the Persepolis Fortification," *JNES* 43 [1984]: 299–310). The Babylonian and Phrygian texts do not seem to be part of the same administrative archive represented by the Elamite and Aramaic texts from the Fortification archive. See n. 15 above for the anepigraphic tablets in the Fortification archive. Some tablets written in Elamite similar to those from Persepolis have recently been identified in Freiburg (Switzerland) (F. Vallat, "Deux tablettes élamites de l'Université de Fribourg," *JNES* 53 [1994]: 263–74) and in the Yale Babylonian Collection (Jones and Stolper, "Two Late Elamite Tablets at Yale," in L. de Meyer, H. Gasche, and F. Vallat, eds., *Fragmenta Historiae Elamicae*, pp. 246–54). Jones and Stolper will soon publish another tablet (now housed in the British Museum) which is similar to those from Persepolis (personal communication).

²⁴ The tablets were discovered in 1933 in the fortification wall at the northeast corner of the terrace at Persepolis by E. Herzfeld. No exact count of the many thousands of complete and fragmentary tablets has been made.

²⁵ Hallock, *Persepolis Fortification Tablets*, published 2087 texts (texts preceded with the prefix PF); Hallock, "Selected Fortification Texts," *Cahiers de la Délégation Archéologique Française en Iran* 8 (1978): 109–36, added another 33 texts (preceded with the prefix PFa). Hallock had read and transliterated another 2,586 texts (these texts and the PFa texts are now preceded with the prefix PFNN; most of the PFNN texts are referenced in Hinz and Koch, *Elamisches Wörterbuch*, AMI Ergänzungsband 17 [Berlin, 1987]). The Fortification archive has been the focus of several specialized studies; for a brief overview, see D. M. Lewis, "The Fortification Texts," in H. Sancisi-Weerdenburg and A. Kuhrt, eds., *Achaemenid History IV: Center and Periphery* (Leiden, 1990), pp. 1–6; Garrison, *Seal Workshops and Artists in Persepolis*, pp. 161–72; see my "Seals and the Elite at Persepolis," *passim*. Koch, *Verwaltung und Wirtschaft*, examines in detail the administrative organization and the duties of officials in the Fortification archive. See also idem, *Es kündigt Dareios der König . . . : Vom Leben im persischen Grossreich*, Kulturgeschichte der Antiken Welt 55 (Mainz, 1992), esp. pp. 29–67, drawing heavily upon the evidence of the Fortification tablets.

²⁶ Hallock, *Persepolis Fortification Tablets*, pp. 24–25.

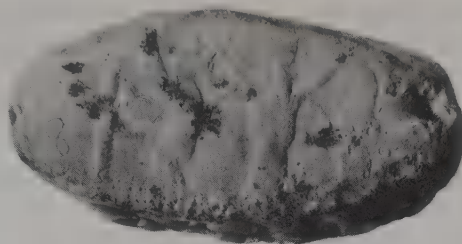


Fig. 5.—Left edge of MDP 11 308 (Louvre Sb 13078) showing seal impression of PFS 7*. Photograph courtesy P. Amiet and B. André-Salvini, Musée du Louvre.

msunki tibba makka, “dispensed in behalf of the king.”²⁷ Besides MDP 11 308, only one other J text names the locale at Susa (PF 737, wine dispensed before Irdabama). PF 726 seems to involve the same commodity as MDP 11 308. The supplier Maštetinna is otherwise unattested in the published texts.

J texts are preserved in relatively small numbers in the Fortification archive (53 texts published to date).²⁸ The J texts stand apart from other texts in the Fortification archive in five ways: (1) the use of the phrasing “dispensed in behalf of the king” (in some cases the royal women Irdabama and Irtašduna take the place of the king); (2) the sometimes extraordinarily large quantity of foodstuffs involved and/or the unusual nature of the commodities; (3) the exalted status of many of the individuals mentioned in the texts; (4) a consistent pattern of seal use; (5) the high quality of the seals used on the tablets.

The exact meaning of the phrase *msunki tibba makka*, “dispensed in behalf of the king,” is unclear. The great majority of texts preserved in the Fortification archive record daily and monthly rations to workers, payments to officials for their services to the state, and travel rations to individuals and groups. The J texts clearly do not deal with any of these three types of deliveries. Hallock suggested that the phrase may imply the actual presence of the king at the places where the transactions occurred.²⁹ In that case, the J texts may list commodities consumed during the king’s travels.³⁰ My analysis of the seal

²⁷ Ibid., p. 24, also translated “*msunki tibba makka*” as “dispensed before the king.” In his glossary (s.v. *tibba*), he gave both “before” and “in behalf of.” In his text editions (both PF and PFa), and in his translation of MDP 11 308 on p. 25, he used only “in behalf of.” See F. Grillot and F. Vallat, “Le semi-auxiliaire *ma-* en élamite,” *Journal asiatique* 263 (1975): 211–17, esp. 213–14, for forms of the verb *ma-*. Hinz and Koch, *Elamisches Wörterbuch*, sub *ti-ib-ba* (vor [räumlich], vorwärts, voraus; zeitlich vielleicht vorher) and *ma-ak-qa* (es ist verzehrt, verbraucht worden).

²⁸ Hallock, *Persepolis Fortification Tablets*, pp. 24–25; PF 691–728, 730–40, 2033–35; PFa 6. There are, in addition, 43 J texts in the unpublished PFNN texts. Hallock, *Persepolis Fortification Tablets*, p. 25, noted that PF 729 was assigned to the J texts “for want of a better place.” In fact, it seems out of place here not only because of the unusual action and the lack of the phrase “*msunki tibba makka*,” but also

because the quality of the two seals, PFS 862 and PFS 863, is very poor (see my “Seals and the Elite at Persepolis,” passim, for stylistic analysis of seals used in the J texts). PF 727 records “4 axes(?) dispensed in behalf of the king,” but the reading “axes” is uncertain (see Hallock, “The Persepolis Fortification Archive,” *Orientalia*, n.s., 42 [1973]: 320–23, esp. p. 321, n. 5).

²⁹ Hallock, *Persepolis Fortification Tablets*, pp. 24–25.

³⁰ In a few J texts dealing with wine or beer, the Elamite word for “dispensed,” *makka*, is replaced by the Elamite word, *kitka*, meaning “expended.” Hallock suggested that “the literal meaning of the verb *kit(i)-* is ‘to pour out’” (Hallock, *Persepolis Fortification Tablets*, p. 25). In PF 707–9, we read *msunki tibba* ANŠE.KUR.RA. Ig *makišda*, which Hallock translated “in behalf of the king, horses consumed.”

patterns used on the J texts (pp. 14–17) suggests some modifications of Hallock's view of the J texts, but, on the whole, I agree that in some cases the commodities may have been intended for the consumption of the royal traveling party.

The transactions often involve extraordinarily large amounts of commodities; in PF 702, the 1,783 BAR of flour represents a day's ration (1 1/2 QA) for 11,886 persons.³¹ PF 701 records 12,610 BAR of flour. The commodities include not only the normal grains, beer, and wine, but also the unusual. PF 2034 documents 1,333 fowl (some quite exotic). Rare commodities include *madukka* (salt?), *banura*, and *razi*. What exactly the terms *banura* and *razi* mean is unknown. They occur only in the J texts.

The king is mentioned in the Fortification archive in various types of texts, usually authorizing the acquisition of commodities by select officials (he/she/they *halmi* "sunkina kutiša, "(who) carry a sealed document of the king").³² In the J texts, the mention of the king is a regular feature of the text. Two individuals seem to take the place of the king in the published J texts based upon the occurrence of their names with the distinguishing phrase *tibba makka*. They are the royal women Irtašduna (PF 730–34 and 2035, *Irtašduna tibba mak*) and Irdabama (PF 735–40, *Irdabama tibba makka*). Irtašduna is known to Herodotus (7.69.2) as Artystone, the daughter of Cyrus and the favorite wife of Darius.³³ She plays a prominent role in the Fortification archive, controlling work groups and addressing letters where she issues rations of wine (PF 1835–39), in three instances from her estates at Mirandu (PF 1835; the place is perhaps the same as Uranduš) and Kunkaka (PF 1836–37). She also occurs with her son Iršama (in Greek, Arsames) (PF 733–34, wine dispensed on their behalf; PF 2035, beer expended on their behalf). The other woman, Irdabama, is known only from the Fortification archive. Her exact relationship at court is not known, but Hallock was convinced that she was a member of the royal family, and Koch has suggested that she was a wife of Darius.³⁴ Thus, the individuals who stand at the center of the transactions recorded in the J texts represent the highest level of Achaemenid society: the Great King and his wives.

³¹ Ibid., p. 24. 1 BAR = 10 QA, 1 QA being approximately one quart. For weights and measures, in general, in the Fortification archive, see Hallock, *Persepolis Fortification Tablets*, pp. 72–74.

³² *Halmi* can mean both a seal and a sealed document. Clearly, in the Fortification texts the term denotes a document (probably sealed with the royal seal) which individuals carry, and not the actual seal of the king. *Halmi* is an Elamite word; its Old Persian equivalent, *miyatukka*, sometimes occurs in its place (see Lewis, "The Persepolis Tablets: Speech, Seal and Script," in A. K. Bowman and G. Woolf, eds., *Literacy and Power in the Ancient World* [Cambridge, 1994], pp. 17–32 [p. 27 for *halmi* and *miyatukka*]).

³³ Hallock, "Evidence of the Persepolis Tablets," pp. 598 and 608, corrected the earlier identification of Irtašduna with a daughter of Darius; Hallock, "Use of Seals," p. 128; Hallock, "Selected Fortification Texts," pp. 110, 113, and 121; Hinz, "Achämenidische Hofverwaltung," ZA 61 (1971): 261–311 (esp. pp. 298–99); Lewis, *Sparta and Persia* (Leiden, 1977), p. 22; idem, "Postscript," in A. R. Burn, *Persia and the Greeks* (London, 1984), pp. 587–612 (pp. 599–600, for Irtašduna); Koch, *Verwaltung und Wirtschaft*, pp. 16,

21, 29, 82, 94, 106, 144, 148, 150–51, 154, 178, 199, 204, 226, 291; M. Brosius, "Royal and Non-Royal Women in Achaemenid Persia (559–331 B.C.)," (D. Phil. thesis, University of Oxford, 1991), pp. 29–31, 42, 62–69, 103–4, 131–34, 197–98; Koch, *Es kündigt Dareios der König*, pp. 236–38.

³⁴ Hallock, "Use of Seals," p. 128; idem, "Evidence of the Persepolis Tablets," p. 608; idem, *Persepolis Fortification Tablets*, p. 24; idem, "Select Fortification Texts," p. 113; Hinz, "Achämenidische Hofverwaltung," pp. 298–99; Koch, "'Hofschatzwarte' und 'Schatzhäuser' in der Persis," ZA 71 (1981): 232–47 (p. 234, Irdabama identified as a wife of Darius); idem, "Zu den Lohnverhältnissen der Dareioszeit in Persien," in H. Koch and D. N. Mackenzie, eds., *Kunst, Kultur und Geschichte der Achämenidenzeit und ihr Fortleben*, AMI Ergänzungsband 10 (Berlin, 1983), pp. 19–35 (p. 30, queen); Koch, *Verwaltung und Wirtschaft*, p. 269 (queen); idem, *Es kündigt Dareios der König*, pp. 238–40 (queen). Brosius, "Royal and Non-Royal Women," pp. 134–52 and 198–99, concludes that Irdabama was certainly highly placed but that her exact position in the royal family is unknown.

The J texts show a very consistent pattern of seal application. Only seven different seals occur on the J texts: PFS 7*, PFS 66*, and PFS 93*, all of which represent offices, and PFS 51, PFS 38, PFS 2, and PFS 859*, all of which belong to individuals.³⁵

IV. THE SEAL IMPRESSION ON MDP 11 308 AND ITS COLLATION WITH PFS 7* FROM THE PERSEPOLIS FORTIFICATION ARCHIVE

The seal used to make the impression on MDP 11 308 (figs. 3–5) also sealed tablets in the Fortification archive. The seal in the Fortification archive is designated as PFS 7* (figs. 6–7).³⁶ PFS 7* is an important seal.³⁷ It carries a trilingual inscription (Old Persian, Elamite, and Babylonian) of Darius the Great:³⁸

[a-]da-ma : da-a-ra-ya-va-[u-ša : xš]

[diš^šú] diš^šda-ri-ia-ma-ú-iš [EŠŠANA]

[ana-ku^m]da-ri-ia-muš [MAN GAL]

I, Darius, King (in Babylonian: Great King)

The impression on MDP 11 308 preserves only one vertical border of the paneled inscription, visible at the far left of the impression on the left edge. The inscription is clear on impressions on the Fortification tablets.

³⁵ An office seal belongs not to a specific person but to an administrative office. Often successive individuals who hold a particular office and use that office seal can be traced (see, for example, Hallock, "Use of Seals," pp. 130–31). Personal seals belong to a specific individuals. I discuss the style and imagery of seals preserved on the J texts in "Seals and the Elite at Persepolis," passim. PF 701 (right edge) and 723 (left edge, mostly destroyed) carry illegible traces which probably were PFS 66* and PFS 7*, respectively.

³⁶ Hallock assigned seal numbers (1–314) only to those seals which occur on more than one tablet in the PF texts. The seal numbers were assigned based on the frequency of occurrence of the seal. Thus PFS 1* is the most frequently occurring seal, appearing on 74 PF tablets, while PFS 314 occurs on only two PF tablets. The number of multiple occurrence seals is, in fact, much higher than those Hallock identified in OIP 92: approximately 500 seals. Hallock had begun to recognize this fact in a later publication of texts from the Fortification archive (Hallock, "Select Fortification Texts," p. 109). Many seals occur, however, on only one tablet. These Hallock left unnumbered. M. Root and I have now assigned numbers to all seals which occur on the PF tablets in preparation for the forthcoming publication of seal impressions preserved on those tablets. Tablets carrying impressions of PFS 7* (corrected from Hallock, *Persepolis Fortification Tablets*, p. 78): PF 697–709, 711–27, and 2034; PFa 6; the seal also occurs on 26 unpublished PFNN texts.

³⁷ Hallock, "The Use of Seals on the Persepolis Fortification Tablets," in M. Gibson and R. Biggs, eds., *Seals and Sealing in the Ancient Near East*, Bibliotheca Mesopotamica 6 (Malibu, 1977), pp. 127–33 (pp. 127–28, pl. E[3], for PFS 7*); Root, *Crowning Glories: Persian Kingship and the Power of Creative Continuity* (Ann Arbor, 1990), pp. 36–37; Hinz, "Achämenidische Hofverwaltung," pp. 299–300; Root, "The Persian Archer at Persepolis: Aspects of Chronology, Style and Symbolism," in R. Descat, ed., *L'Or perse et l'histoire grecque*, Revue des études anciennes 91 (Paris, 1989), pp. 33–50 (esp. pp. 40–42, figs. 2–3); Koch, *Verwaltung und Wirtschaft*, p. 88; see my "Seal Workshops and Artists in Persepolis," pp. 220, 255, 367, 372, 376, 377, 390, 391, 394–401, 414, 416, 474, 475–81, 489, 491, and 529–30; idem, "Seals and the Elite at Persepolis," pp. 13–21; Harper Aruz, Tallon, *The Royal City of Susa*, p. 273, no. 191; Lewis, "The Persepolis Tablets," pp. 30–31; my "The Identification of Artists and Workshops in Sealed Archival Contexts: The Evidence from Persepolis," in M.-F. Boussac and A. Invernizzi, eds., *Proceedings of the Congress Archives, Sealings and Seals in the Hellenistic World* (Turin, in press); Root and Garrison, with an appendix by C. Jones, "Royal Name Seals in the Persian Empire" (in preparation). The drawing (fig. 7 here) is collated from 31 impressions of PFs 7* studied to date. Estimated original height of the cylinder seal: 3.00 cm.; estimated original diameter: 1.70 cm.

³⁸ The inscription on PFS 7* has been known for some time. It has most recently been published, with



FIG. 6.—Impression of PFS 7* on the reverse of PF 707

PFS 7* shows a crowned figure in an heroic encounter. He stands upright, facing the viewer's right, arms stretched out straight above shoulder level to grasp two rampant, winged bulls by their horns. A human figure with bird's wings and tail hovers directly over the head of the hero. This figure faces the viewer's right and raises both arms before his chest; he may hold something in his lower hand. The wings and tail of the figure are broad and rectilinear.³⁹ A tendril hangs from either side of the tail, terminating in a hook. Date palms with bulbous fruit clusters frame the scene. Diagonal marks occur on the trunk of each tree. Each line of the inscription is enclosed in a panel.

The hero wears the Persian court robe. The sleeves of the garment are pushed up to reveal the hero's bare arms. The gathered folds of the sleeves hang down on either side of the torso. The lower part of the garment has a central pleat and diagonal folds. The hero's beard terminates in a blunt point over his left shoulder. His hair hangs straight down at the back of the neck, bunching up at the end as if in a chignon. A strong jawline

previous bibliography, in R. Schmitt, *Altpersische Siegel-Inschriften*, Sitzungsberichte der Österreichischen Akademie der Wissenschaften, Phil.-Hist. Kl. 381 (Vienna, 1981), p. 22, sub SDe; see also M. Mayrhofer, *Supplement zur Sammlung der altpersischen Inschriften*, Sitzungsberichte der Österreichischen Akademie der Wissenschaften, Phil.-Hist. Kl. 328 (Vienna, 1978), p. 16, sub 3.11.1, for only the Old Persian. Known as SDe, the inscription on PFS 7* is one of the standard trilingual (Old Persian, Elamite, Akkadian) inscriptions of Darius I. The visible portions of the inscription SDe are identical to the inscription on the famous London Darius cylinder (SDa). Each line of

SDe is, however, enclosed in a panel, and the signs seem to be slightly taller compared to the length of each line than in SDa. The inscription occurs with variations also on the PTS 1* (SDb), PTS 2* (SDc), PTS 3* (SDd), PFS 11* (Sdf), PFS 113*/PTS 4* (SDg), and PFS 1683* (unpublished); for all the inscriptions see Schmitt, *Altpersische Siegel-Inschriften*, pp. 19–24, s.vv.

³⁹ Cf. the winged disks on the Behistun relief, the Persepolis tomb façades, PTS 2*, PTS 15, and PTS 26; see the discussion in M. Roaf, *Sculptures and Sculptors at Persepolis*, Iran 21 (London, 1983), pp. 133–38.

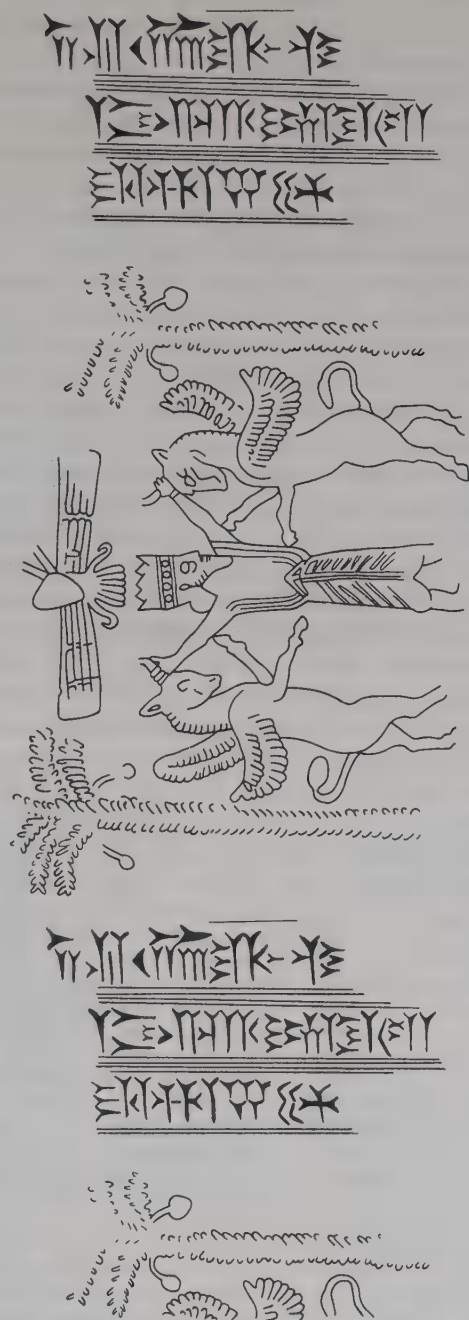


FIG. 7.—Collated line drawing of PFS 7*

starts directly under the base of the crown, running down vertically to the jaw where it then continues diagonally to the beard. A slight curl next to the jawline just below the crown indicates the ear. The mouth is straight, the large eye oval and set at a diagonal, the nose straight and prominent. The dentate crown has five points.⁴⁰ Four circles enclosed in a horizontal band decorate the lower part of the crown.

Each bull has two slender, curved wings, one placed horizontally from the back, the other diagonally. The wings consist of two rows of feathers. The lower wing comes across the shoulder of each creature, the top line of the wing rib arching down toward the lower foreleg.

The seal is an important example of a seal carving style traditionally labeled the Court style.⁴¹ The earliest documented appearance of the Court Style is in the late sixth century B.C. on the seal impressions on the Fortification tablets at Persepolis. Court Style seals in the Fortification archive generally are connected with officials and offices of the highest order, and in four cases, PFS 7*, PFS 11*, PFS 113*, and PFS 1683*, they carry inscriptions naming Darius (the only seals in the Fortification archive to do so). The imagery is fairly restricted and reflects themes of control and power similar to those seen in architectural relief from Persepolis. This may suggest a consciously planned visual expression of empire in many media, directed, perhaps, by Darius and his closest advisors.

As mentioned, only seven different seals occur on the J texts. Two of the seals, PFS 7* and PFS 66*, represent offices. In the case of these two seals, the individuals holding the offices are never mentioned by name; we know of them only through the impressions of their office seals. PFS 7* and PFS 66* never occur outside of the J texts (and hence almost always in association with the phrase *"sunki tibba makka"*).⁴² The seals also do not seem to have any geographical restriction. That the seals occur only in the J texts and have no geographical restriction suggest that the seals represent special offices closely associated with the king; perhaps, as Hallock suggested, these offices even moved with the king as he traveled or moved just ahead of him in order to prepare for his arrival.⁴³ In this scenario, they would not only receive deliveries, but also oversee the provisioning of the king's table and ensure that the commodities were at the correct place in time for the king's arrival. PFS 7*, the seal on MDP 11 308, occurs more frequently and seems to represent the office with highest authority.⁴⁴ This office oversees transactions involving all types of commodities "dispensed in behalf of the king" except cattle. The second office

⁴⁰ Ibid., pp. 131–33 and Root, *King and Kingship*, pp. 92–93, 99, 117, 121–22, 171, 304, 306–7, for Achaemenid crowns.

⁴¹ J. Boardman, *Greek Gems and Finger Rings* (New York, 1970), p. 305, first coined the term "Court Style" to describe a special class of Achaemenid Persian seals which, in his opinion, show close connections, especially iconographically, to architectural sculpture at Persepolis. Boardman did not go into a detailed stylistic analysis of the Court Style. I have articulated some of the specific stylistic attributes of the Court Style, as well as its stylistic connections to other glyptic traditions of the first millennium B.C. (see my "Seal Workshops and Artists in Persepolis," pp. 11, 383–419, 471–92, and 528–30; idem, "Seals and the Elite at Persepolis," pp. 13–21). The Court Style, in its earliest phases as found in the seal impressions pre-

served on the Fortification tablets, does seem closely connected to the court of the Persian king, but by the mid-fifth century B.C., seals cut in the Court Style seem to have a very wide distribution.

⁴² The exceptions are PF 707–9, for which see n. 30 above.

⁴³ On the preparations surrounding the arrival of the Persian King, see Briant, "Le nomadisme du Grand Roi," *Iranica Antiqua* 23 (1988): 253–73. Note also the remark of Herodotus (7.32) on preparations for the king's arrival.

⁴⁴ Koch, *Verwaltung und Wirtschaft*, p. 88, identifies the office as the "Hofspeisenmeister." Lewis, "The Persepolis Tablets," pp. 30–31, seems to identify PFS 7* as one of the king's personal seals, given out to someone else (or office?) to use.

seal, PFS 66* (applied on the left, right and/or upper edges of the tablets), occurs only on flour deliveries and requires always the application of PFS 7* on the reverse of the tablets.⁴⁵

Transactions involving cattle “dispensed in behalf of the king” were overseen by the office represented by PFS 93*.⁴⁶ Like the other office seals PFS 7* and PFS 66*, PFS 93* occurs only on J texts. One of these texts, PF 692, contains, however, not the normal phrase, *ṣunki tibba makka*, but *ṣunki zakke* (an ox “paid to the king”). The text may not be a J text *in stricto sensu*. Besides PF 692, we have only four published cattle transactions in the J texts sealed with PFS 93*. It is notable that three of these (PF 694, 695, and 2033) mention no specific place name, but only that the cattle were dispensed on behalf of the king at villages. In the one text that does include place names (PF 693), eight cattle are dispensed in behalf of the king and slaughtered in several places, all of which may lie in or near one administrative region, Koch’s Southeastern Region (III).⁴⁷

Three observations suggest that the conditions governing our interpretation of PFS 7* and PFS 66* do not apply to PFS 93*. First is the occurrence of PFS 93* in PF 692, a text which does not conform to the normal phrasing of J texts. Second is the lack of evidence for widespread travel by this office (although future publications may alter this). Third is the commodity associated with the office represented by PFS 93*, cattle. Cattle (and animals in general) and rations of meat after slaughter are rarely recorded in the Fortification texts, and when they are, they are usually restricted to specific places.⁴⁸ It is difficult to discern patterns with such limited evidence, but based upon these considerations there is the possibility that the office represented by PFS 93* stayed mainly in a cattle-raising area overseeing the cattle belonging to the crown and did not travel with the king.

The three seals PFS 7*, PFS 93*, and PFS 66* representing the offices in the J texts are notable for their inscriptions and their well-executed designs.⁴⁹ This stands in direct contrast to the great majority of seals preserved on tablets in the Fortification archive;

⁴⁵ Occurrences of PFS 66*: PF 699–704; the seal also occurs on seven unpublished PFNN tablets. Hallock, “Use of Seals on the Persepolis Tablets,” p. 127, suggested that PFS 66* represented the office of the royal miller. The seal, in fact, occurs in two versions on the Persepolis tablets; the original seal (PFS 66a*) was replaced by a new seal (PFS 66b*) copying the same style and imagery (see my “Seals and the Elite at Persepolis,” pp. 10–12). Both seals carry the same Aramaic inscription, which seems to read: “[m]n vtp̄p.” The second word seems to be a personal name, but no known parallels exist in either Aramaic or Elamite (comments courtesy C. Jones; see again my “Seals and the Elite,” p. 26, n. 68).

⁴⁶ The seal, an heirloom from the Neo-Elamite period, carries an inscription naming Cyrus the Anshanite, son of Teispes. References to PFS 93*: Hallock, “Use of Seals on the Persepolis Tablets,” p. 128, pl. E(4); Root, *King and Kingship*, pp. 27 and 120; Amiet, “La glyptique de la fin de l’Elam,” no. 28; Bollweg, “Protoachämenidische Siegelbilder,” pp. 53–58 (no. 1), pl. 30 (1–3); Root, “From the Heart: Powerful Persianisms in the Art of the Western Empire,” in A. Kuhrt and H. Sancisi-Weerdenburg, eds., *Achaemenid*

History VI, Asia Minor and Egypt: Old Cultures in a New Empire (Leiden, 1991), pp. 1–29 (esp. pp. 21–22); Porada, “Cylinder Seals” in *Encyclopaedia Iranica*, vol. 5.5, pp. 479–505 (p. 500, pl. 47.9 for the Cyrus cylinder); see my “Seals and the Elite at Persepolis,” pp. 3–7; Root, Garrison, and Jones, “Royal Name Seals” (in preparation). Occurrences of PFS 93*: PF 692–95, 2033; the seal also occurs on ten unpublished PFNN texts. One cattle text, PF 691, is sealed by PFS 859* rather than PFS 93* (see p. 31 below).

⁴⁷ PF 693 is dated to the nineteenth year of Darius (503–502 B.C.) and lists the following places: Umbaka, Kurra, Ku.īšla, Bat.mana, Tīrušbakka(?), Anzamanakka, Kutima, and Haršana. Umbaka and Tīrušbakka(?) occur only in this text, and thus their exact geographical relationship with the other sites cannot be determined with accuracy (Koch, *Verwaltung und Wirtschaft*, p. 88).

⁴⁸ See Koch’s comments in “Die achämenidische Poststrasse von Persepolis nach Susa,” *AMI* 19 (1986): 133–47 (esp. pp. 145–46, for rations of meat to travelers).

⁴⁹ See Garrison, “Seals and the Elite at Persepolis,” *passim*, for more detail.

these seals only very rarely carry inscriptions and sometimes are poorly carved. Clearly, PFS 7* and PFS 93*, owing to their royal name inscriptions, must have been valued objects with close personal associations to the Achaemenid royal family. The officials who used them must have had close ties to the court; perhaps they were even members of the Achaemenid family.

Three of the four personal seals which occur on the J texts belong to high ranking members of the Achaemenid elite. The royal woman Irtašduna uses PFS 38 on six published J texts;⁵⁰ she also ratifies five published letters with this seal.⁵¹ The other royal woman, Irdabama, employs her personal seal, PFS 51, on six J texts, as well as on one letter (PFa 27) and one special ration (PF 1185).⁵² The occurrence of the personal seals of these two women on the J texts seemingly in lieu of the office seals PFS 7* and PFS 66* may indicate that those offices have been bypassed. Perhaps the commodities have been drawn on the personal authority of the royal women, and they have applied their seals to the tablets in order to indicate that they (not the offices represented by PFS 7* and PFS 66*) authorize the transaction and that they and their retinue (not the king and his retinue) consume the commodities.⁵³

On one J text (PF 710) Irtuppiya uses his personal seal, PFS 2, a seal which he uses very often outside of the J texts.⁵⁴ Irtuppiya is an important official, who seems to have wide administrative responsibilities in Koch's Elam Region (VI).⁵⁵ His importance is reflected in the diverse and many transactions which he oversees and in the frequent occurrence of his seal in the archive (the second most commonly occurring seal). His seal never occurs with another seal, indicating his high administrative authority. He is mentioned by name often as a supplier in the J texts, the tablets always sealed by PFS 7*.⁵⁶ The one occurrence of his seal on a J text is unusual. We should note, however, that the text concerns cattle. Since the cattle texts with PFS 93* may not imply the same situation as J texts sealed with PFS 7* and PFS 66*, the mention of cattle in association with a completely unexpected seal, PFS 2, in PF 710 might alert us to a possible anomaly. Could

⁵⁰ PF 730–34 and 2035; the seal also occurs on three unpublished PFNN J texts.

⁵¹ PF 1835–39; also three unpublished PFNN T texts.

⁵² J texts: PF 735–40; the seal also occurs on six unpublished PFNN texts, four of which are J texts.

⁵³ The whole of this question hangs on the grouping of those tablets sealed with PFS 38 and PFS 51 with other J texts based upon the occurrence of the phrase *tibba makka* (*Irtašduna tibba mak*; *Irdabama tibba makka*). Perhaps we are making too much of the similarity, but the fact that it is always a member of the royal family (king, Irtašduna, or Irdabama) in the phrase suggests that the texts are related. It is notable also that of the twelve published texts sealed with PFS 38 or PFS 51, five concern wine (PF 732, 735, 736, 737) or beer (PF 2035). Only one other published J text records wine or beer (wine in PF 728), and no seal has been applied to the tablet. I do not know exactly what to make of this, but it may suggest that the offices represented by PFS 7* and PFS 66* do not have jurisdiction over or access to liquid commodities, and so the women must draw

them from other resources (their own?). Their grain texts are, however, in no way different from those sealed with PFS 7* or PFS 66*, except for the occurrence of their names and their seals. Most likely the application of their seals implies that they have the same authority as the king in these types of transactions. Their seals are for the accountants, indicating that they, not the king, have drawn the commodities.

⁵⁴ Occurrences of PFS 2: PF 15, 113, 442, 465–66, 540, 542, 544, 585, 598, 613, 832, 1000–1001, 1049–53, 1055–57, 1065, 1067–73, 1187–89, 1605–6, 1651, 1681, 1699–1700, 1709, 1715–16, 1748, and 1845–48; also 33 unpublished PFNN texts.

⁵⁵ Koch, *Verwaltung und Wirtschaft*, pp. 241–43 (identified as the Director of the “Intendantur” of her Elam Region [VI]). See also Hallock, “Evidence of the Persepolis Tablets,” pp. 597 and 600; Hallock, “Use of Seals,” p. 131; Hinz, “Achämenidische Hofverwaltung,” pp. 286–87 (identified as the “Hofspeicherwart” and director of Hinz’s Abteilung I, “Cerealien,” of the “Hofintendantur”).

⁵⁶ PF 709, 711–13, 717, 724–25, and PFa 6.

the phrase *"sunki tibba makka* characterize (and so identify) the cattle, rather than the transaction itself?⁵⁷ If this is so, PF 710 would not be a J text but an ordinary receipt for barley that implies a prior J text (sealed with PFS 93*) having to do with the delivery of the cattle.⁵⁸ Thus Irtuppiya is provisioning cattle which had already been delivered (and, presumably, were awaiting slaughter).

The last seal used on the J texts, PFS 859*, occurs on only one tablet (PF 691). The text concerns cattle (clearly a commodity for which patterns of administrative practice are difficult to discern), and we expect the seal of the cattle office, PFS 93*. I have suggested that the seal is a personal seal of the official who holds the office represented by PFS 93*; for this particular transaction he did not have his office seal and so used his personal seal.⁵⁹

V. IMPLICATIONS AND HISTORICAL FRAMEWORK FOR MDP 11 308 AND THE PERSEPOLIS FORTIFICATION ARCHIVE

As discussed at the beginning of this article, the documentary evidence from the Susa excavations for the provenance of MDP 11 308 does not allow us to say beyond doubt that the tablet comes from Susa. I have stated my reasons for believing that the tablet comes from Susa. The linking of MDP 11 308 to Susa remains, however, a postulate. The following comments are based upon the assumption that MDP 11 308 comes from Susa. The commentary attempts to understand MDP 11 308 within the historical and administrative framework provided by the Persepolis Fortification tablets and to speculate on the extension of that framework to other parts of the empire.

The occurrence of contemporary administrative documents of similar formal type (i.e., serving similar purposes) at different sites is to be expected. It is unusual, however, to find evidence for this. It is also extremely striking to find evidence of the same seal (PFS 7*) appearing on tablets from different sites. The collation of text and seal between two sites is quite rare in the artifactual record preserved from the ancient Near East in any period.

The occurrence of MDP 11 308 at Susa suggests that there existed at Susa a large administrative archive (as yet undiscovered), since an administrative text is likely to be a piece of a larger archive, rather than an isolated phenomenon. The similarity of MDP 11 308 to texts from the Persepolis Fortification archive also suggests that this administrative archive at Susa was similar to the Fortification archive at Persepolis. The occurrence of the same seal at the two sites (PFS 7*) suggest that the same offices were involved at both places, perhaps even the same people. This gives evidence for a wide-ranging administrative

⁵⁷ The place is Šursunkiri in Elam. This is the only cattle transaction located outside of Koch's southeastern Region (III); this may account for Irtuppiya's actions here. Note also that the text says *halmi Irtuppiya(na)*, "seal (or sealed document) (of?) Irtuppiya" (paralleled only by PFS 728 *halmi Ukurduš(na)*, where no seal has been applied). In my "Seals and the Elite at Persepolis," pp. 12–13, I suggest that the cattle need special provisioning. Koch, *Verwaltung und Wirtschaft*, p. 243, suggests that the cattle are being fattened in preparation for the arrival of the king.

⁵⁸ The text might be better classified with S1 texts (regular rations for animals), where, in fact, Irtuppiya and his seal PFS 2 figure prominently (issuing his *halmi* [PF 1651, 1715] and receiving commodities [PF 1699, 1709]; other occurrences of PFS 2 in S1 texts are PF 1681, 1700, 1748). D. Lewis (personal communication, 17 August 1993) said that he would classify PF 710 as an S1 text as well.

⁵⁹ See my "Seals and the Elite at Persepolis," pp. 13–21. The inscription preserved in impressions of the seal is fragmentary and is illegible.

jurisdiction for at least one office (represented by PFS 7*) and may imply an interconnected network of administrators between the sites.

If MDP 11 308 comes from Susa, we may then be able to assume that there existed at Susa a state food distribution apparatus similar to the one documented in the texts of the Persepolis Fortification archive. As discussed above, however, J texts, such as MDP 11 308, stand apart from the majority of texts in the Fortification archive (mainly receipts and accounts) owing to the prominent role of the king, the high status of other individuals and offices mentioned in the text and the high degree of mobility of those personnel. J text transactions, for these reasons, might have taken place at various places whenever the king happened to pass through a site or an area. Some of the texts recording the transactions might have been deposited where the transactions occurred. These texts then would document not the existence of archives similar to the Fortification archive but simply irregular transactions accompanying the king's movements.

As a J text, MDP 11 308 does not guarantee the existence of an archive exactly similar to that at Persepolis. It does show, however, that at least one important type of transaction which occurs in the Persepolis Fortification archive also occurred at Susa. There exists also the Susa anepigraphic tablet (whose provenance is not in doubt), which is probably administrative in nature.⁶⁰ In addition, the Fortification tablets themselves give evidence, although rare, of deliveries of commodities at Susa.⁶¹ We thus know that some administrative activity in addition to royal provisioning took place at Susa. I have argued that *a priori* historical assumptions make it likely that there existed an administrative apparatus at Susa. The proximity of Susa and Persepolis, the fact that both were imperial capitals, and the traditional ties which existed between Susiana and Fars suggest that the local food production and distribution, and the recording of it, may have been similar. Thus, an archive at Susa (now represented only by MDP 11 308) similar to the Fortification archive at Persepolis very likely existed.

Since Susa was an imperial capital as well as the seat of the satrapy of Elam, it would also be well suited to serve as a central place and administrative headquarters, much as Persepolis seems to act in the Fortification archive. One might infer that a possible archive at Susa similar to the Fortification archive would record provisioning around and to the west (toward Babylonia), northwest (toward Assyria along the royal road to Sardis), and/or north (toward Ecbatana) of Susa, since the Fortification archive covers provisioning to the southwest of Susa. Owing to the need for ease of transport of information, materials and personnel, the road system must have played a critical role in the hypothetical Susian (and the actual Persepolis) food distribution apparatus.

Although present evidence cannot prove the existence of a food distribution apparatus at Susa similar to that recorded in the Fortification archive, it seems highly unlikely that the administrative concerns reflected in the Fortification archive were unique to the area of Fars and Khuzistan. The archive represents a rather narrow set of concerns: the collection of food commodities and the distribution of food commodities to, for example, agricultural workers, administrators, and travelers (some of high rank and traveling in

⁶⁰ See n. 15 above.

⁶¹ Specifically, flour (PF 88, 90–92), *hamarram*, *kudakena*, *aššana*, *šiprim* (PF 136, all apparently a kind of bread), and barley loaves(?) (PF 318). PF 737

records wine “expended in behalf” of Irdabama at Susa. Transactions at Susa are rarely recorded in the Fortification archive, since Susa lay outside its administrative boundaries.

large parties) passing through the area.⁶² These concerns are frankly banal in comparison to what some other Near Eastern archives from earlier periods record (for example, royal correspondence; the collection of raw materials for manufacture [including precious metals]; the transport of textiles, weapons, tools, and religious paraphernalia; the collection of taxes, etc.).⁶³

It is its concern with basic subsistence (food) which argues most strongly that similar types of administrative structures may have existed not only at Susa, but also throughout the empire; such basic needs were universal.⁶⁴ Here the travel ration texts (Q texts) may provide some backdrop in which to view the issue. In the PF texts published by Hallock travel ration texts are more numerous than any other type of text.⁶⁵ They record rations to travelers, some of them seemingly on the road between Susa and Persepolis.⁶⁶ The travelers are often mentioned as coming from or going on to such far-flung places as Egypt (PF 1544), Sardis (PF 1321, 1404), Assyria (1574), Sagartia (1501), Arachosia (PF 1351, 1385, 1439, 1443, 1474, 1484, 1510, 2049; Kandahar mentioned in 1358, 1440, 1550), Bactria (PF 1287, 1555), and India (PF 1318, 1383, 1524, 1556, 2057). How were these travelers provisioned before their entry into or after their departure from Fars and Khuzistan? I seriously doubt that they were left to forage on their own.⁶⁷

Thus, we should expect administrative activity at Susa similar to that which we have documented at Persepolis. What is, perhaps, rather surprising is the similarity in the ways that the Susa and Persepolis administrative systems recorded their operations. Both centers

⁶² There are clearly many gaps in our documentation. We do not know exactly how or where the documents were produced or how they came to be deposited in the fortification wall at Persepolis. The fact that dated texts are unevenly distributed in both the J texts and the archive as a whole cannot be explained satisfactorily (for example, we do not have any J texts for the Years 13–18, 20, 23, 26, and 28, and it seems highly unlikely that no transactions of this type took place). The uneven distribution might reflect record-purging procedures, the actual fluctuations in economic and accounting activity or the fluctuations in recording and filing of that activity. Alternatively, the uneven distribution of dated texts might reflect gaps owing to modern recovery, preservation, and selective publication of the texts. (We should remember that the published texts represent perhaps less than a third of the total number of preserved texts. Future editions of the texts may help to fill the lacunae which currently exist.) In addition, the exact nature of the find-spot of the Fortification tablets is unclear. Surprisingly, little information was provided by Herzfeld on the archaeological context of the tablets. Herzfeld referred to the find-spot of the tablets as “two little archive chambers in the fortification wall,” implying a primary context (E. Herzfeld, “Recent Discoveries at Persepolis,” *JRAS* [1934]: 231; Hallock said, however, that the tablets had been redeposited in the fortification wall as fill (“Persepolis Fortification Archive,” p. 320). See a fuller discussion of the issues surrounding the find-spot of the Fortification tablets in my “Seal Workshops and

Artists in Persepolis,” pp. 161–62 and 169–70. Despite all these uncertainties, Hallock was inclined to see the uneven distribution of the dated tablets as reflective of “changes in the economic operations and in the accounting methods” (*Persepolis Fortification Tablets*, p. 74).

⁶³ Certainly, these and many other types of transactions took place at Persepolis, but a record of them has not survived.

⁶⁴ The Fortification archive, of course, records food distribution by the state only to some elements of the population. These consist mainly (but not exclusively) of officials traveling through the area on state business (Q texts) and agricultural workers.

⁶⁵ Our sample is biased, of course, by the texts Hallock selected for publication and the idiosyncrasies of ancient archival practice and archaeological preservation and retrieval. Nevertheless, a large number of travel ration texts exist, and this seems to indicate that the provisioning of travelers was an important function of the food administration.

⁶⁶ Koch, “Die achämenidische Poststrasse von Persepolis nach Susa,” *passim*.

⁶⁷ Cf. the famous Aramaic text of Aršam, a Persian governor and a prince of the royal house (G. R. Driver, *Aramaic Documents of the Fifth Century B.C.* [Oxford, 1957], no. 8; for a new copy and edition including translation and commentary, see B. Porten and A. Yardeni, *Textbook of Aramaic Documents from Ancient Egypt*, 2 vols. (Jerusalem, 1986–), vol. 1, A.6.10.

opted to record in Elamite cuneiform on clay tablets of a distinctive size and shape.⁶⁸ The archival practices at Susa and Persepolis may, however, have been similar to each other in organization and recording owing to long-standing cultural and political associations.⁶⁹ Susa and Persepolis also are likely to have shared similar recording practices because they lay in adjacent districts. In addition, there is evidence that Elamite was used in various other places of the Achaemenid empire to record administrative activity.⁷⁰

The logical inference of the need to provision officials traveling at imperial expense on the main roads throughout the empire suggests that there existed in other parts of the empire local administrative systems through which these travelers moved, and received rations.⁷¹ Using the Fortification archive as a model, this provisioning would seem to have been accomplished through local administrative structures managed, to a greater or lesser extent, by the central authority of the crown.⁷²

If there were a series of local food distribution networks which the state supported, each with a major administrative center, they most likely would not be closed cells, sealed off from one another; rather, their boundaries were probably flexible, and one area would be able to draw resources from another (note that a few deliveries at Susa were recorded in the Fortification archive). We might also suppose that the satrapal system may have provided some general boundaries, but it is interesting that the Fortification archive, although centered in Persis, extends into the satrapy of Elam.⁷³ Each administrative area was most likely served by its own group of administrators (having their own

⁶⁸ Rather than, for example, in Babylonian cuneiform on rectangular clay tablets or in Aramaic on leather.

⁶⁹ See also the comments on p. 32 above. For a recent summary of the long-standing and complex relationships between Susiana and Fars, see Amiet "An Introduction to the History of Art in Iran," in Harper, Aruz, and Tallon, *The Royal City of Susa*, pp. 2–15; Amiet, "Sur l'histoire élamite," *Iranica Antiqua* 27 (1992): 75–94.

⁷⁰ See the comments and references in Jones and Stolper, "Two Late Elamite Tablets at Yale," p. 248, noting the discovery of the Achaemenid Elamite administrative tablets at Kandahar, Chogha Mish, and Qasr-i Abu Nasr. The two Achaemenid Elamite texts from Kandahar in Afghanistan are very similar to those from the Fortification archive (see S. W. Helms, "Excavations at 'The City and the Famous Fortress of Kandahar, the Foremost Place in all of Asia,'" *Afghan Studies* 3–4 [1982]: 1–24 [p. 13 for the texts]; note the remarks of Briant, *L'Asie centrale et les royaumes proche-orientaux au premier millénaire* (c. VIII^e s. av. n. è.) [Paris, 1984], pp. 59–61). I. M. Diakonoff and N. B. Jankowska, "An Elamite Gilgameš Text from Argištihenele, Urartu (Armavirblur, 8th Century B.C.)," *ZA* 80 (1990): 102–23, published an Elamite tablet found in excavations in Armenia, interpreting it as a new version of the Gilgamesh story. Koch has recently published an article in which she argues that this text is actually a Persepolis-like administrative document (see "Elamisches Gilgameš-Epos oder doch Verwaltungstafelchen," *ZA* 83 [1993]: 219–36).

⁷¹ Glimpses of other possible archives are provided by the texts cited in n. 70 above. In this context, the "inscribed bullae" from Daskyleion could conceivably also represent another archive concerned with food distribution (see recently D. Kaptan-Bayburtluoğlu, "A Group of Seal Impressions on the Bullae from Ergili/Daskyleion," *Epigraphica Anatolica* 16 [1990]: 15–27). The documents mentioned or illustrated to date are generally described as part of the satrapal or palace records, although the evidence for this statement seems to rest chiefly on the fact that they were discovered at Daskyleion, a satrapal city. From descriptions and illustrations of the "inscribed bullae," they seem to be anepigraphic bullae, some of which have been sealed with inscribed seals. Although they do seem to have been attached to papyrus or parchment rolls, their exact administrative function is unknown.

⁷² Cf. Briant's remarks in *Rois, tributs et paysans* (Paris, 1982), pp. 207–11, and chap. 11 in his *De Cyrus à Alexandre: Une histoire de l'empire achéménide* (Leiden, in press).

⁷³ Compare the discrepancy between Herodotus's list of tax-paying districts (3.89–96) versus what is known of the boundaries of political provinces of the time; see A. T. Olmstead, *History of the Persian Empire* (Chicago, 1948), pp. 291–97; J. M. Cook, *The Persian Empire* (New York, 1983), pp. 77–90. Most scholars have preferred not to identify Persis as a satrapy, although the issue is by no means settled; see, for example, Lewis, *Sparta and Persia*, pp. 8–9 (my thanks to P. Briant for this reference).

seals).⁷⁴ We would expect the seals of the court élite, or highly placed bureaucrats, to occur in different areas, since they are likely to have had propertied and administrative interests in many areas. Offices and individuals mentioned in J texts would be likely to appear at different places, since they involve individuals of high rank and offices, some of whom may have actually traveled with or just ahead of the king. Thus they move freely, crossing administrative boundaries. The fact that the royal lady Irdabama gets rations at Susa (PF 737, sealed with her seal PFS 51) might indicate that certain members of the royal family also could draw commodities in different areas on their personal authority.⁷⁵

The exact nature of structures for the provisioning of officials, workers, and administrators anywhere in the empire outside of the area covered by the Fortification archive, remains, of course, unknown. Given the complexity of the Persian empire and the characteristics of regional variation, we should be prepared for considerable variation in the forms of recording and archival practice from region to region. As mentioned above, the archival practices at Susa and Persepolis may have been more similar to each other in organization and recording practice than to administrative offices found elsewhere in the empire owing to long-standing cultural and political associations and because they lay in adjacent districts. Practice must have varied from locale to locale, but the imperial superstructure could have provided the organizational nexus to insure the smooth provisioning of local officials and workers, and the steady stream of travelers on crown business, through local administrative systems in various realms of the empire.

⁷⁴ The fact that the supplier recorded on the Susa tablet, Maštetinna(?), is unknown in the texts from the Fortification archive might add support to this argument, but many suppliers occur only once in the Fortification archive. He is, however, most likely a local supplier.

⁷⁵ It is not striking that Irdabama can draw rations at Susa but rather that the tablet recording this transcription is found in the Persepolis archive (see n. 61 above for other deliveries at Susa). Is this because the commodity is wine, a substance more difficult to

acquire since it was not normally issued as rations to work groups? The amount is not insubstantial (236 *marriš*), and perhaps Susa could not easily accommodate large rations of nongrain commodities; see Koch, *Verwaltung und Wirtschaft*, pp. 297 and 301, for the scarcity of fruit cultivation in Elam and the frequent substitution of beer for wine rations in this region (of course, wine and fruit could have been produced in the region, but no record of it survives in the Fortification archive).

A SEQUENCE OF VOWEL SHIFTS IN PHOENICIAN AND OTHER LANGUAGES*

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I. INTRODUCTION

A number of vowel shifts in the history of Phoenician¹ may be understood as part of a sequence of shifts, part of which forms a drag-chain. Seeing the history of the Phoenician vowels in the context of this cross-linguistically common sequence of vowels brings order to the limited and sometimes unclear data.

Given this sequence, vowel shifts in many other languages from the Ancient Near East fall into place—they are following a typologically common direction of change. Among the many languages in which some or all of these shifts occur are Hebrew, dialects of Aramaic, North Mehri, Egyptian-Coptic, as well as many other languages world-wide, including Phoenician's cultural neighbor, Greek.

The shifts in question in Phoenician are $\acute{a} > o^2$ (the Phoenician Shift), $o > u$, $u > \ddot{u}$ (u from proto- $* u/\ddot{u}$), and possibly $\ddot{u} > i$. The earlier shift $\bar{a} > o$ (the Canaanite Shift) may also be taken into account as an element of this pattern of shifts. These shifts all move in a definite direction: they may be depicted as a circular movement on a vowel chart (table 1).

Many earlier studies of vowel shifts in Phoenician and Hebrew deal with shifts in this sequence, even though they do not mention the sequence explicitly. The evidence for the shifts, which has already been gathered, does not need to be repeated in full, but the sequence that unites the shifts needs to be examined in greater depth. We can better understand these studies of the shifts if we realize that where attested or reconstructed vowel shifts skip one or more steps of the sequence, scholars implicitly assume the necessity of the sequence as the course of development of the vowels and so provide the missing links.

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The following abbreviations are used:

GAG: Wolfram von Soden, *Grundriß der akkadischen Grammatik, samt Ergänzungsheft zum Grundriß*, Analecta Orientalia 33 and 47 (Rome, 1969).
KAI: Herbert Donner and W. Röllig, *Kanaanäische und aramäische Inschriften*, 2 vols. (Wiesbaden, 1968).

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¹ In the terminology used here, "Punic" is the Phoenician of North Africa ("Neo-Punic" should be used only to specify that the text in question is later than the fall of Carthage), and "Phoenician" is a cover term for all the dialects, including the littoral (Lebanon) dialects and Punic, throughout the long history of these dialects. Cf. Maurice Sznycer, "L'emploi des termes 'Phénicien', 'Punique', 'Néo-Punique': Problèmes de méthodologie," in Pelio Fronzaroli, ed., *Atti del secondo congresso internazionale di linguistica camito-semitica*, Firenze, 16–19 aprile 1974, Quaderni di Semitistica 5 (Florence, 1978), pp. 261–68.

² Because length is not indicated in most of the scripts used, the phonemes, ɔ , o , u , \ddot{u} , and i , which form part of the sequence, are not marked for length in this study. It is quite possible that Phoenician developed a qualitative vowel system from a quantitative one, as Tiberian Massoretic Hebrew did. The vowels discussed as part of the sequence here, however, other than \acute{a} , are historically long.

of the lack of distinct graphemes in the orthographies,⁸ although I support a reconstruction of ʔ as an intermediate step on structural grounds. Were there such a step, the shift of á to ʔ would have formed an isogloss for the geographically proximate Tiberian Hebrew⁹ and Phoenician,¹⁰ although the chronological separation makes a causal connection unlikely.

The Phoenician Shift does not operate in double closed syllables, as seen in *qatl* nouns, including those from geminate roots.¹¹ For example, Χουσαρτ for *kušart*, in which the á does not shift to o, stands in contrast with the masculine equivalent, Χουσωρ for *kušor*, in which the Phoenician Shift does occur.¹² This can be explained by a ban on long vowels in doubly closed syllables only if we posit stress-lengthening as an intermediate step for the Phoenician Shift.¹³

Aron Dotan presents an idiosyncratic view of the transcriptional evidence of Phoenician which denies the existence of the Phoenician Shift.¹⁴ He addresses the evidence for the shift piecemeal, explaining why each particular type of evidence for á > o instead represents some other phenomenon. Some of the evidence for the Phoenician Shift on which Dotan casts doubt is indeed difficult. Thus, for example, Phoenician *labon*, transcribed λαβον, may well belong to a *qatol* < *qatul(l)* pattern.¹⁵ Some of Dotan's examples are reconstructed incorrectly, as for example *tošḫ*, which should be reconstructed to **taššab* rather than **-āb* as he suggests.¹⁶ Other examples are attributed to the wrong language. For example, the Hebrew *dəḡon*, Δαγων in Greek, is adduced by Dotan as a biform of Hebrew *dəḡon* to show that the second vowel in Phoenician is the result of the Canaanite Shift rather than the Phoenician Shift.¹⁷ In fact, the difference between the two is between a Phoenician word that underwent the Phoenician Shift, *dagon*—a name of a god probably hypostasized from the word for the grain—and a Hebrew word that did not undergo the Phoenician Shift, *dəḡon*, "grain." Other cases must be understood in the light of the particular morphology of Phoenician, since, as Dotan points out, the morphemes of Phoenician do not necessarily correspond to those of Hebrew.¹⁸ Dotan brings up the apparent third person masculine plural suffix on SYLLOHOM and MYSYRTHOHO[M] and dismisses the possibility that the o before the suffix could be the result of the Phoenician Shift because Hebrew does not have *qoməṣ* (the usual cognate of the product of the Phoenician Shift) in this position.¹⁹ Indeed, Charles Krahmalkov has pointed out that in Phoenician, unlike Hebrew, the connecting vowel before pronominal possessive suffixes

⁸ Ibid.

⁹ Chaim Rabin ("Semitic Languages," *Encyclopaedia Judaica*, vol. 14 [Jerusalem, 1971], p. 1154) connects the Phoenician Shift with the Ashkenazic and Yemenite ʔ-*qoməṣ* as well.

¹⁰ Because of the complicated stress histories of these languages, Hebrew *qoməṣ* is not always cognate to the product of the Phoenician Shift.

¹¹ Just as the first syllable of Hebrew *qétel* < *qatl* is not lengthened under stress.

¹² E. Y. Kutscher, "*kənaʿanîṭ*, *ʿibrit*, *pînîqîṭ*, *ʔārāmîṭ*, *laššôn hāzāʿî*, *pûnîṭ*" ("Canaanite, Hebrew, Phoenician, Aramaic, Mishnaic Hebrew, Punic" [Hebrew]), *Lěšonenu* 33 (1968–69): 96. See sec. II, 4 below.

¹³ The *a* vowel in a doubly closed syllable remains *a* even when anaptyxis later opens up the syllable, as, for example, ALEM which represents Punic (*ʿ*)*alem* <

ʿalm (*Poenulus*, l. 948; For the text of the *Poenulus* with discussion, see Maurice Sznycer, *Les passages puniques en transcription latine dans le "Poenulus" de Plaute* [Paris, 1967]).

¹⁴ Aron Dotan, "Vowel Shift in Phoenician and Punic," *Abr Nahrain* 12 (1971–72): 1–5; idem, "The Phoenician A > O Shift in Some Greek Transcriptions," *Ugarit-Forschungen* 3 (1972): 293–97 (reprint of "Vowel Shift in Phoenician and Punic"); and idem, "Phoenician/Punic—Hebrew Linguistic Relationship Re-Examined," *Israel Oriental Studies* 6 (1976): 71–121.

¹⁵ Idem, "Phoenician/Punic—Hebrew," p. 75.

¹⁶ Ibid., p. 76.

¹⁷ Ibid., p. 80.

¹⁸ Ibid., p. 111.

¹⁹ Ibid., pp. 102–3; *Poenulus*, l. 933.

following the noun stem was *o*, which he derived from the old nominative case vowel **u*,²⁰ although it may come from the old accusative case vowel **a*. Dotan's arguments against individual cases cannot refute the mass of the evidence, and so the different types of evidence for Phoenician vowels add up to a clear picture of the Phoenician Shift.

3. $\bar{a} > o$

The shift of proto-* \bar{a} to *o*²¹ is the Canaanite Shift, which is at least as early as the Amarna texts, in the fourteenth century B.C.E.—probably from the early fifteenth century B.C.E.²² It occurs in all Canaanite languages, including Phoenician and Hebrew. Besides Proto-Semitic * \bar{a} , any \bar{a} that arose before the operation of the Canaanite Shift was subject to its effect. The loss of syllable-final * $\bar{\omega}$ in Proto-Canaanite, before the Canaanite Shift, brought with it, we assume, compensatory lengthening. Thus, $a^{\bar{\omega}} > \bar{a}$, and thence the *o* in, for example, Hebrew $ro(\bar{\omega})\dot{s} < r\bar{a}\dot{s} < ra^{\bar{\omega}}\dot{s}$. On the other hand, some occurrences of * $a^{\bar{\omega}}$ shifted to * \bar{a} after the operation of the Canaanite Shift, appearing as $\bar{\omega}$ in Hebrew but as *o* in Phoenician, as in *nasot*²³ = *našot(i)*.²⁴ Such forms can be attributed to the Phoenician Shift, usually $\bar{a} > o$, operating unconditioned by quantity on newly formed long \bar{a} . Since * \bar{a} can be reconstructed as an intermediate step of the Phoenician Shift, attributing such cases of $a > o$ to the Phoenician Shift is not out of keeping with the course of the Phoenician Shift.

4. $o > u$

The product of the Phoenician Shift did not merge with the product of the Canaanite Shift. Rather, the *o* from the Canaanite Shift shifted to *u*,²⁵ at ■ point when the product

²⁰ Charles Krahmalkov, "Observations on the Affixing of Possessive Pronouns in Punic," *Rivista degli studi orientali* 44 (1969): 185–86; idem, "The Punic Speech of Hanno," *Orientalia*, n.s., 39 (1970): 62. Krahmalkov also points out that the *-hom* may be the second person masculine plural possessive suffix.

²¹ The question of the relevance of stress to the application of the Canaanite Shift is a controversial one and cannot be decided here. Daniel Sivan (*Grammatical Analysis and Glossary of the Northwest Semitic Vocables in Akkadian Texts of the 15th–13th C. B.C. from Canaan and Syria*, Alter Orient und Altes Testament, vol. 214 [Kevelaer and Neukirchen-Vluyn, 1984], p. 33) describes how the scholars line up on either side of the issue but points out that "there is no way of knowing which of the scholars is correct." The evidence for unstressed \bar{a} to \bar{o} , which would have to come from unstressed \bar{a} 's in the proto-language, is not available. If the Canaanite Shift was stress-conditioned, however, and if \bar{a} is to be posited as an intermediate step of the Phoenician Shift (sec. II, 2 above), then we would have an even more striking similarity between the Canaanite and Phoenician Shifts: $\bar{a} > o$ in each case.

²² Harris, *Development of the Canaanite Dialects*, American Oriental Society, vol. 16 (New Haven,

1939), p. 44; and Garr, *Dialect Geography*, p. 31.

²³ *Poenulus*, l. 937.

²⁴ Dotan ("Phoenician/Punic—Hebrew," p. 73) writes **našōti* for the Phoenician; $\dot{s} > \dot{\bar{s}}$ in Phoenician quite early, however, before the development of the writing system. The Hebrew word $mo\dot{s}\bar{\omega} < *maw\dot{s}a^{\bar{\omega}}$ (not **maw\dot{s}\bar{a}^{\bar{\omega}}* as Dotan suggests [ibid., p. 76]) is another example of $a^{\bar{\omega}} > \bar{a}$ occurring after the cessation of the operation of the Canaanite Shift.

²⁵ Szzymer (*Les passages puniques*, p. 149) describes a "son intermédiaire entre *o* et *u*." If there were such a sound at some point, however, it was halfway through the shift $o > u$. This would be an additional stage in our sequence between *o* and *u*. While Szzymer suggests ■ merger as *o* and *u* moved towards an intermediate position, the examples he adduces are of earlier *o* written with *u*, with no examples of earlier ■ written as *o*. This indicates a movement of *o* towards *u*, and not *u* towards *o*. That the shift $o > u$ is not always complete is seen in the writing of *o* side-by-side with *u*, both from Proto-Semitic * \bar{a} , for example, *ma-com*, *alonuth* (*Poenulus*, l. 930; see Klaus Beyer, *The Aramaic Language: Its Distribution and Subdivisions*, trans. John Healey [Göttingen, 1986], p. 35, n. 45).

of the Phoenician Shift was still *o* and had not yet shifted to *o*.²⁶ Had *o* from the Canaanite Shift and *o* from the Phoenician Shift merged, the markers of the feminine plural noun and the singular feminine noun would have merged to *-ot*, since the *-at#* of the feminine singular on nouns did not go to *-ā* in Phoenician until late in the history of Punic. Rather, the feminine plural noun marker became *-ut*.²⁷ (For example, *alonuth*,²⁸ Punic *SANUTH*).²⁹ Χουσωρ, *kušor* is an example of two shifts operating in the same word.³⁰ Ugaritic *kθr* = *kōθar*,³¹ Arabic *kawθar*, and Hebrew *košar*³² suggest an original **kawθar*. The first syllable has *u* from *o* < *aw*, while the second has *o* from *ā*.³³

5. *u* > *ü*

The product of the *o* to *u* shift did not merge with original *u*. Rather, earlier *u* shifted to *ü*.³⁴ This is a phonologically exceptional step for the Semitic languages, as rounded front vowels are very rare in this family.³⁵ But there is some admittedly meager evidence for *ü* in Phoenician and in Punic in particular: Greek upsilon, originally pronounced *u*, came to represent *ü* in Attic-Ionic from an early date, perhaps already by the sixth century B.C.E. (although in certain dialects the *u* pronunciation lasted until much later) and remained *ü* in most of the Hellenistic dialects through the third century C.E. Upsilon later was pronounced *i*.³⁶ The debated date of the shift from *ü* to *i* is not strictly relevant to the discussion of the existence of Phoenician *ü*, for if we see *u* used to transcribe a vowel in Phoenician that is the reflex of Proto-Semitic **u*, then the *u* may indicate one of three situations in the two languages:

1. At the time that the transcription was made, *u* indicated *ü*, and proto-**u* was *ü* in Phoenician.

²⁶ On *o* > *u*, see Kutscher, "*kāna'anit*, '*ibrit*,'" p. 91; Segert, *Grammar of Phoenician*, §34.3, 4; Harris, *Grammar*, §7; and Friedrich and Röhlig, *Grammatik*, §79b. In order to prove that Proto-Northwest-Semitic II-weak perfect forms had short **a*, for example, **ram-*, not long **ā*, for example, **rām-*, Kutscher uses the shift *o* > *u*. According to Kutscher, transcriptions such as *hīrōm* (1 Kings 5:24, 7:40), Εἰρωμος (Josephus; see Harris, *Grammar*, for these forms and others) underwent the Phoenician Shift *ā* > *ó* rather than the Canaanite Shift *ā* > *o*. For if the Proto-Northwest-Semitic form had been **rām-*, shifting to *rom-* with the Canaanite Shift, then it would have shifted to *rum-* under the later *o* > *u* shift, but the transcriptional evidence does not support that. Rather, the Proto-Northwest-Semitic form was **ram-*, shifting to *rom-* under the Phoenician Shift. Indeed, proto-*ram-* is easily explainable as a result of paradigm leveling with the forms with consonant-initial suffix, such as **ramtā*. The short *a* in **ramtā* is shortened from *ā* in a doubly closed syllable. This is why the paradigm has *o* throughout in Hebrew but *o*, the product of the Phoenician Shift, in Phoenician.

²⁷ Segert, *Grammar of Phoenician*, §52.233.

²⁸ *Poenulus*, l. 930.

²⁹ *KAI*, p. 180.

³⁰ See sec. II, 2 above.

³¹ Segert, *A Basic Grammar of the Ugaritic Language with Selected Texts and Glossary* (Berkeley and Los Angeles, 1984), p. 190. Syllabic cuneiform evidence supports this vocalization, *kōθar* < *kawθar*, as against **kāθar* (suggested by Dotan, "Phoenician/Punic—Hebrew," p. 76). See Segert, *Basic Grammar of Ugaritic*, p. 190; and John Huehnergard, *Ugaritic Vocabulary in Syllabic Transcription*, Harvard Semitic Series 32 (Atlanta, 1987), p. 141.

³² Ps. 68:7.

³³ Note also that when the final syllable is doubly closed in the feminine, in Χουσαρτ *košart*, the *ā* does not shift to *o* (Kutscher, "*kāna'anit*, '*ibrit*,'" p. 96).

³⁴ Segert, *Grammar of Phoenician*, §36.42; Friedrich and Röhlig, *Grammatik*, p. 85.

³⁵ Except for the *ü* which von Soden (*GAG*, §8c) sees in certain Akkadian "broken writings." (Most Assyriologists do not accept this.)

³⁶ William Sidney Allen, *Vox Graeca*, 3d ed. (Cambridge, 1987), pp. 65–69; see also Edgar Sturtevant, *The Pronunciation of Greek and Latin* (Philadelphia, 1940), §36.

2. At the time that the transcription was made, υ indicated i , while proto- $*u$ was \ddot{u} in Phoenician, but υ ($= i$) was chosen as one of the closest graphemes to \ddot{u} .
3. At the time that the transcription was made, υ indicated i and proto- $*u$ had shifted beyond \ddot{u} to i in Phoenician.

Each of these three interpretations is compatible with the existence of a Phoenician \ddot{u} .

Although υ in the earliest period was pronounced u , this reading cannot be supported for the period of the Greek transcriptions. This is because u had a different orthography of its own—the digraph $\omicron\upsilon$,³⁷ as, for example, $\text{KOY}\Lambda\Omega \leftarrow qol$ -,³⁸ and $\text{Mou}\tau \leftarrow mut < mot < mawt$.³⁹

The Latin letter y in the Punic passages in Latin script in the *Poenulus* of Plautus is particularly valuable because of its origin in Greek υ . Manuscripts of the *Poenulus*, however, show the cumulative distortion of generations of copyists who did not know Punic. One important point which must restrain our use of the y 's is that "the alphabet used by Plautus did not have y ."⁴⁰ The y 's in the *Poenulus* were inserted later, long after the play's composition, as a scholarly repair to a corrupted text.⁴¹ Were the y 's inserted at random, however, as Harris has suggested,⁴² they could be found in any position in a word, whereas, in fact, they seem to occupy positions where we might expect a reflex of proto- $*u$ or $*i$.⁴³ We may use the *Poenulus* for evidence of Punic vowels, but only with great caution.

The shift $u > \ddot{u}$ can be understood by noting the difference in the direction of the change of features between this shift and the previous ones. Before this shift in the sequence, the shifts moved the vowels higher on the vowel chart (table 1). But u is the highest vowel; thus any shift from u cannot continue the previous shifts in the direction of making the vowel even higher. Rather, another feature must be changed, and so the u shifts from back to front. In fact, u -fronting is extremely common cross-linguistically, perhaps because of the asymmetry of the vocal organs—the back of the throat is narrower than the front. While intermediate steps between u and \ddot{u} are not known from

³⁷ Allen, *Vox Graeca*, pp. 75–79; and Sturtevant, *Pronunciation*, §35d.

³⁸ See *KAI*, p. 175.

³⁹ Harris, *Grammar*, p. 116.

⁴⁰ Friedrich and Röllig, *Grammatik*, §90; Harris, *Grammar*, p. 5. The importance of paying attention to the conclusions of Latin scholars in examining Latin transcriptions is pointed out by A. S. Gratwick, "Hanno's Punic Speech in the *Poenulus* of Plautus," *Hermes* 99 (1971): 36–40. Plautus uses neither y nor "the spelling th , ch or z . For y , u was used; for th , ch , one wrote t , c ; for z , one used s . The spellings th , ch (and ph . . .) first occur about the middle of the 2nd century B.C., well after Plautus; y was introduced about 50 B.C." Neglecting facts well known to Latin scholars, some Semitic scholars "offer us Punic texts that contain no words with [Punic] Z ," instead of considering whether the text could include some Punic z 's written s .

⁴¹ Gratwick, "Hanno's Punic Speech," p. 36.

⁴² *Grammar*, p. 5.

⁴³ "[T]ext II (the repetition of the text in Punic) is the genuine version, already desperately corrupt in the early Empire, and . . . text I is a scholar's repair, made up independently, but with reference to text II, in the contemporary Neo-Punic and Roman orthography of his time" (Gratwick, "Hanno's Punic Speech," p. 37). If the Punic in Latin letters were transcribed directly from an original in Greek letters, the υ , not yet used in the Latin alphabet, could have been used among the Latin letters, especially when no other transcription of Greek υ was available (Gad Ben-Ami Sarfatti, review of Sznycer, *Les passages puniques*, in *Lěšonenu* 33 [1968–69]: 49). Indeed, Latin orthography did just this but not until 50 B.C.E. (Gratwick, "Hanno's Punic Speech," p. 37). See, for example, *chil* in l. 935 in MS Codex vetus Camerarii, but *chyl* in MSS Codex Decurtatus and Codex Ursinianus (Sznycer, *Les passages puniques*, p. 46).

Phoenician or other languages where the shift occurred, it is possible that *u* proceeded through the high-central rounded vowel before becoming *ü*.⁴⁴

6. *ü* > *i*

Finally, *ü* may have been derounded to *i*.⁴⁵ The evidence for this last shift is not clear because of difficulties inherent in the transcriptional systems. As mentioned above (sec. II, 5), if we see proto-**u* transcribed with a grapheme that typically denotes *i*, we cannot know if that really indicates *i* or *ü*. Derounding of *ü* and merger with earlier *i*, however, is a cross-linguistically common phenomenon, especially as an end product of this sequence of shifts (see secs. IV and VI below).

III. SUMMARY OF THE REFLEXES OF THE PROTO-SEMITIC VOWELS

The steps of the sequence under consideration in Phoenician are summarized in table 2 below.

TABLE 2

Diachronic Development of Proto-Semitic **á*, **ā* **aw*, and **u* in Phoenician⁴⁶

Proto-Semitic	<i>á</i>	<i>ā, aw</i>	<i>u</i>
Common Canaanite	<i>á</i>	<i>o</i> ⁴⁷	<i>u</i>
Phoenician	<i>o</i>	<i>u</i>	<i>ü</i>

⁴⁴ Hans H. Hock, *Principles of Historical Linguistics*, Trends in Linguistics, Studies and Monographs 34 (Berlin, 1986), p. 155.

⁴⁵ This shift is quite different from the "sound change *u*—*i* in closed syllables," with intermediate stage *ü*, analyzed at length by Kutscher, *The Language and Linguistic Background of the Isaiah Scroll (IQIsa^a)*, Studies on the Texts of the Desert of Judah, vol. 6 (Leiden, 1974), pp. 452–96. The shift Kutscher mentions is a fundamentally different type of shift from all those mentioned in our sequence, as Kutscher recognizes (*ibid.*, p. 496), since it is an alternation between short vowels in a limited phonetic environment, perhaps as a type of *Murmelvokal*, especially under dissimilatory influence, rather than an unconditioned shift. Moreover, it is not a "strong" sound shift, but only a tendency that occurs to greater or lesser extent in various languages. Kutscher's shift of short *u* to *i* in closed syllables appears to be quite widespread in the area under consideration in this essay. John Huehnergard, however ("Historical Phonology and the Hebrew Piel," in Walter R. Bodine, ed., *Linguistics and Biblical Hebrew* [Winona Lake, Indiana, 1992], p. 221, n. 53), challenges the validity of this shift in at least some of the dialects that Kutscher

considers.

⁴⁶ Kutscher ("kāna'anîṭ, 'ibrîṭ") presents a slightly different picture of the Phoenician/Punic reflexes of Proto-Semitic **a*, **ā*, **ā*, and **ū*: they were close to *a*, *o*, *u*, and *ü* respectively, but in Kutscher's opinion they may have been more precisely *æ* ("front a"), *ɔ*, high *o* (like Sznycer's "son intermédiaire entre *o* et *u*" [*Les passages puniques*, p. 149]), and *u* respectively. "Front *a*" would be the Phoenician *a* (unshifted to *o* when unstressed), which Kutscher places on the vowel chart in a more front position than the low mid *a* we have in our vowel chart (see table 1 above), presumably to make the *a* vowel as phonetically distinct as possible (*ibid.*, pp. 92, 95). Kutscher's high *o* can be considered, like Sznycer's intermediate *o/u*, an intermediate stage of the shift *o* > *u* described here (sec. II, 4). In any case, Kutscher generally agrees with the directions of the shifts in table 3, while differing on the exact phonetic position of the reflexes. Because Kutscher treats both *ou* and *v* as *u*, when in fact they denoted *u* and *ü* respectively, however, his conclusions do not take into account Phoenician *ü*.

⁴⁷ *aw* > *o* occurred in North Canaanite, but in the Jerusalem dialect only in unstressed syllables.

IV. THE SAME SEQUENCE IN SEMITIC AND OTHER ANCIENT NEAR EASTERN LANGUAGES

This sequence of sound changes is also found in many languages related to Phoenician or in its geographical area.

As mentioned above,⁴⁸ Hebrew includes a few of the shifts from the sequence. The Canaanite Shift, $\bar{a} > \bar{o}$, is shared by Hebrew and Phoenician. The shift of stressed $\acute{a} > \text{ɔ}$ ($qom\text{ɔ}s$) with stress-lengthening, $\acute{a} > \acute{\bar{a}}$, as an intermediate step, resembles the Phoenician Shift in the conditioning environment⁴⁹ and in the direction of movement of the vowel.⁵⁰ Centuries later, certain Ashkenazi Hebrew dialects took the sequence even further, shifting $\text{ɔ} > o$, $o > u$, and even $u > i$.⁵¹

Some Aramaic dialects participated in this sequence of shifts,⁵² including Western Syriac (Jacobite), Ma^clūla, and Christian Palestinian Aramaic. Long \bar{a} (stressed or unstressed) shifted to \bar{q} ($Z^e q\bar{q}\bar{f}\bar{q}$) and \bar{o} to \bar{u} ($E\bar{s}\bar{q}\bar{q}\bar{s}\bar{q}$). In the case of Syriac, the shift can be dated as far back as the first century C.E.⁵³ This does not occur in Eastern Syriac, but it does in the modern Eastern Aramaic dialect of Ṭūrōyō.⁵⁴ The shift $\acute{a} > \acute{\bar{o}}$ occurs in the modern Western Aramaic dialect of Ma^clūla.⁵⁵ There are several possibilities for the origin of these Aramaic shifts: first, this may be a late influence of neighboring Canaanite dialects that had long since undergone the Canaanite Shift;⁵⁶ second, the isogloss between $\bar{a} > o$ regions and $\bar{a} > \bar{a}$ ones may have been an early one, which continued for millennia in the same geographic area, despite the change of languages in the region (according to dialect-continuum theory). Given the chronological separation, I would reject such causal links and instead attribute the Aramaic shifts to a third option: an independent sound shift that occurred in western dialects of Aramaic along the lines of the sequence under consideration, motivated by a cross-linguistic tendency to move vowels in this direction.⁵⁷

Mehri has a large part of the sequence in the history of its vowels. Proto- $\ast\acute{a}$ ⁵⁸ [$\acute{\bar{a}}$]⁵⁹ $> \acute{\bar{o}}$ is as far as the sequence goes in South Mehri, while in North Mehri this $\acute{\bar{o}}$ shifts onwards to $\acute{\bar{u}}$. Thus, for example, the third-person masculine singular G perfect, proto- $\ast qatala$, is $qat\acute{\bar{u}}l$.⁶⁰ Unlike the \acute{a} of Phoenician, original \acute{a} in Mehri goes beyond o all the way to u .

⁴⁸ See sec. II, 1 and 3.

⁴⁹ Although Hebrew also demonstrates pretonic $\bar{a} > qom\text{ɔ}s$.

⁵⁰ Furthermore, as pointed out above (sec. II, 2), we cannot know if the product of the Phoenician Shift was not at some point ɔ .

⁵¹ These were often conditioned on shifts in the Yiddish substrate. On Ashkenazic Hebrew, see Dovid Katz, "The Phonology of Ashkenazic," in L. Glinert, ed., *Hebrew in Ashkenaz: A Language in Exile* (Oxford, 1993), pp. 47–87. On Yiddish, see William Labov, *Principles of Linguistic Change*, vol. 1, *Internal Factors*, Language in Society 20 (Oxford, 1994), pp. 131, 285–87, 313–14.

⁵² Labov, *Principles*, p. 122.

⁵³ Carl Brockelmann, *Syrische Grammatik*, 5th ed. (Leipzig, 1938), §43; and Kutscher, *Isaiah Scroll*, p. 495.

⁵⁴ Adolf Siegel, *Laut- und Formenlehre des neuarāmäischen Dialekts des Ṭūr ʿAbdīn* (Hannover, 1923), §43. In Mandaic "both o and \bar{a} are often replaced by a short back \bar{a} " (Rudolf Macuch, *Handbook of Classical and Modern Mandaic* [Berlin, 1965],

p. 30). The shift $a > \text{ɔ}$ fits into our sequence, but $o > \text{ɔ}$ is a movement in the opposite direction.

⁵⁵ Anton Spitaler, *Grammatik des neuarāmäischen Dialekts von Ma^clūla* (Leipzig, 1938), §2b, §5c.

⁵⁶ F. Praetorius ("Zur hebräischen und arāmäischen Grammatik," *ZDMG* 55 [1901]: 369) has suggested an origin for the Canaanite Shift among the autochthonous non-Semitic inhabitants of the area in the mid-second millennium B.C.E. Evidence for this is slim.

⁵⁷ Garr, *Dialect Geography*, p. 66.

⁵⁸ Note the similarity between the stress-conditioning in Mehri and in Phoenician.

⁵⁹ This \bar{a} appears to be a hypothetical intermediate step for which there is no evidence.

⁶⁰ Maximilian Bittner, *Studien zur Laut- und Formenlehre der Mehri-Sprache in Südarabien*, vol. 2, *Zum Verbum*, 168. Band, 2. Abhandlung, Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien, Phil.-hist. Kl. (Vienna, 1911), p. 7; and Ewald Wagner, "Gedanken zum Verb des Mehri aufgrund der neuen Materialien von Johnstone," *Zeitschrift für arabische Linguistik* 25 (1993): 323.

In Attic-Ionic Greek, the creation of \bar{o} overcrowded the space of back vowels, creating the conditions for the shifts $\bar{o} > \bar{u}$ and $\bar{u} > \bar{i}$. Later, the \bar{u} was derounded to \bar{i} . In spite of the well-known contacts between Phoenician and Greek, this sequence is cross-linguistically common, and so it probably developed independently in the two languages.⁶¹

Vocalic shifts belonging to the sequence of shifts have been reconstructed for the development from ancient Egyptian into Coptic. Direct evidence for the vocalization of the hieroglyphic stages of Egyptian is sparse, but it seems safe to assume that the following shifts occurred: Egyptian $\bar{a} >$ Coptic o , and $\bar{a} > \bar{o}$.⁶² (Here stressed short $*\bar{a}$ and long $*\bar{a}$ have reflexes whose quantities differ. We cannot know the quantities of the reflexes of $*\bar{a}$ and $*\bar{a}$ in Phoenician.) Also the shift $u > i$ has been plausibly postulated for Egyptian and Coptic, including the intermediate step $*\bar{u}$.⁶³

V. PROCESS OF PULL- (DRAG-) AND PUSH-CHAINS

Two modes of operation have been described for chain-shifts: the push-chain, in which the shift of one phoneme towards another causes the shift of the target phoneme away from its former position, setting off yet another shift in turn, and the drag-chain, in which the shift of one phoneme allows another to fill its vacated former position, the vacuum created being filled in turn.⁶⁴

There is a fundamental difference in principle between the drag-chain and the push-chain models. In the drag-chain model, phonemes move to fill a gap in the phonetic structure. In the push-chain model, on the other hand, phonemes move to avoid a possible phonemic merger. But while phonetic structures tend to remain well balanced (restoring balance when it is lacking), phonemic inventories often tolerate mergers, even when the merger causes homonymy.⁶⁵ Thus, "push-chain analyses rest on considerably weaker theoretical foundations than do drag-chain analyses," and, in those languages that have been

⁶¹ Sound developments in one language are frequently influenced by a neighboring unrelated language.

⁶² Leo Depuydt, personal communication, fall 1994; Jürgen Osing, *Die Nominalbildung des Ägyptischen: Textband* (vol. 1), Deutsches Archäologisches Institut, Abteilung Kairo (Mainz, 1976), pp. 10–11; Wolfgang Schenkel, *Einführung in die altägyptische Sprachwissenschaft*, Orientalische Einführungen (Darmstadt, 1990), pp. 87–88 (he dates $\bar{a} > o$ to "ca. 550–450 v. Chr." and $\bar{a} > \bar{o}$ to "zwischen der Zeit Ramses' II. und der Assyrerzeit"); Kurt Sethe, "Die Vokalisierung des Ägyptischen," *ZDMG* 77 (1923): 166–71; William Foxwell Albright, "The Principles of Egyptian Phonological Development," *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes* 40 (1923): 66 (he dates the shifts to "after 1300").

⁶³ "Long Semitic [and Ancient Egyptian] \bar{u} corresponds to Coptic \bar{i} . . . There must have been a sound like French u or German \bar{u} in Neo-Egyptian." Werner Vycichl, "Egyptian and Other Hamito-Semitic Languages," in James and Theodora Bynon, eds., *Hamito-Semitic*, Proceedings of a Colloquium Held by the Historical Section of the Linguistics Association

(Great Britain) at the School of Oriental Linguistics Association (Great Britain) at the School of Oriental and African Studies, University of London, on the 18th, 19th, and 20th of March 1970 = *Janua Linguarum*, Series Practica 200 (The Hague and Paris, 1975), p. 205; Albright, "Principles," p. 66; and Schenkel, "Einführung," p. 90, give a slightly different shift, $\bar{u} > \bar{e}$.

⁶⁴ This approach, together with an examination of similar vowel chain-shifts, is represented by André Martinet, *Economie des changements phonétiques: Traité de phonologie diachronique*, Bibliotheca Romanica, Series Prima, Manualia et Commentationes 10 (Bern, 1955). See esp. pp. 50–52. In fact, phonemes often do merge and do not always maintain the same relative distribution. Martinet's functionalist approach has been rejected by generative theories which define sound shifts as the insertion of discrete rules (Edward Greenstien, personal communication, spring 1993) and by a desire to avoid naive teleological arguments (Ladbov, *Principles*, p. 549).

⁶⁵ Hock, *Principles*, pp. 150–52.

studied in the process of change, no push-chains have been observed.⁶⁶ Our sequence is therefore more likely to have been a drag-chain than a push-chain.

VI. OTHER CHAIN-SHIFTS OF THE SAME SEQUENCE

Similar sequences of shifts have been discovered in many languages, including Akha, Albanian, English, Frisian, German, Greek, Lappish, Lithuanian, Old Prussian, Portuguese, Romansh, Swedish, Swiss French, Syriac, and Yiddish.⁶⁷ Comparison with these languages suggests universal principles of chain shifts, which can help clarify the Phoenician situation: the cross-linguistic principles "in chain shifts, long vowels rise" and "in chain shifts, back vowels move to the front"⁶⁸ are represented by the shifts $\acute{a} > o$, $o > u$, and $u > \ddot{u}$, as recognized in Phoenician.

One of the most complete examples of the chain-shift, which occurred in some of the Scandinavian languages around 1200–1400 C.E., will shed light on the Phoenician chain-shift.⁶⁹ First the shift $\bar{a} > \bar{a}$ (where \bar{a} came from a lengthening of short $*a$) caused overcrowding of the back-vowels. This was relieved by a shift of \bar{u} frontwards to $\bar{æ}$ (the rounded mid central vowel), which, in turn, set off a shift of \bar{o} to \bar{u} .⁷⁰ This shift, in turn, "dragged" after it $\bar{a} > \bar{o}$.⁷¹

Compare Phoenician, where a new back vowel ɔ developed from \acute{a} , and Greek, where a new back vowel \bar{o} developed from the diphthong ou and from short o .⁷² Phoenician pursued a course similar to that of the other languages, I would suggest: there was an overcrowding of the back vowels caused by the Canaanite and Phoenician Shifts. The overcrowding pushed u to \ddot{u} , however, which dragged o to u in turn. Thus, Phoenician underwent a drag-chain that was triggered by an initial entry of an extra phoneme into the space of back vowels.

VII. THE SEQUENCE OF SHIFTS SUMMARIZED

Our sequence of shifts, seen to its fullest extent in Phoenician, includes an example of a drag-chain of phonetic shifts, as seen in table 3.

Leaving out of consideration for the moment the very early Canaanite Shift, and leaving out theoretical intermediate steps, the well-documented shifts in Phoenician are $\acute{a} > o$ (the Phoenician Shift), $o > u$, and $u > \ddot{u}$. Kutscher⁷³ has already stated that $\acute{a} > o$ and $o > u$ happened "all at once," and we add that $u > \ddot{u}$ was simultaneous with these, as a drag-chain. The sequence as a whole, which is very common cross-linguistically, systematizes our knowledge of the history of Phoenician vowels.

⁶⁶ Theodora Bynon, *Historical Linguistics*, Cambridge Textbooks in Linguistics (Cambridge, 1977), p. 88; and Hock, *Principles*, p. 157.

⁶⁷ Labov, *Principles*, p. 122. Labov reviews the course of some of these shifts in detail. Structuralist principles are applied to the cases of French, Greek, and Azores Portuguese in A. G. Haudricort and A. G. Juillard, *Essai pour une histoire structurale du phonétisme français* (Paris, 1949), pp. 100–113.

⁶⁸ Labov, *Principles*, p. 116.

⁶⁹ Einer Haugen, *The Scandinavian Languages: An Introduction to Their History* (London, 1976),

p. 257; P. Oktor Skjaervo personal communication, spring 1994; and Labov, *Principles*, pp. 130–31, 281.

⁷⁰ Compare Sznycer's (*Les passages puniques*, p. 149) "son intermédiaire entre o et u " of Phoenician.

⁷¹ Written with the grapheme \acute{a} in modern Norwegian and Swedish.

⁷² Allen, *Vox Graeca*, pp. 76–77; and Hock, *Principles*, p. 156.

⁷³ " $kana^{\text{c}}an\ddot{u}t$, $^{\text{c}}i\ddot{b}rit$," p. 91.

TABLE 3

GREEK ⁷⁴	CANAANITE, PHOENICIAN, PUNIC	PHOENICIAN	HEBREW
proto-Greek a ↓ \bar{a}		\acute{a} ↓ \bar{a} (tonic lengthening)	\acute{a} ↓ \bar{a} (tonic lengthening)
\bar{a} ↓ α	proto-Canaanite \bar{a} ↓ α (intermediate step suggested for Canaanite Shift)	\bar{a} ↓ α (intermediate step suggested for the Phoenician shift)	\bar{a} ↓ α (Tiberian $q\alpha m\alpha s$)
	α ↓ o (completion of Canaanite shift)	α ↓ o (completion of Phoenician shift)	α ↓ o (Ashkenazic Hebrew $q\alpha m\alpha s$)
$o \approx ow$ ↓ u	o ↓ u (in Phoenician)		
u ↓ \ddot{u} \ddot{u} ↓ i	u ↓ \ddot{u} \ddot{u} ↓ i ⁷⁵		

NOTE: the horizontal lines separate the developments of different proto-vowels.

⁷⁴ Sturtevant, *Pronunciation of Greek and Latin*, §§34–46.

⁷⁵ The evidence for $\ddot{u} > i$ is weak.

BOOK REVIEWS*

Waqf in Central Asia: Four Hundred Years in the History of a Muslim Shrine, 1480–1889. By R. D. McCHESNEY. Princeton: Princeton University Press, 1991. Pp. xv + 356 + 3 maps. \$49.50.

This excellent monograph is an in-depth case study of the Islamic institution of *waqf* in medieval Central Asia that painstakingly traces the evolution of the endowments of the shrine complex of ʿAlī b. Abī Talīb in what is today the town of Mazar-i Sharif in northern Afghanistan from the time of its founding in the village of Khwajah Khayran near Balkh in 1480 by the Timurid ruler Sultan Husayn Bayqara until the incorporation of its administration into the Afghan state in 1889. The author's goals are not merely to demonstrate the dependence of the shrine's endowments on geographical and socio-religious factors, but also to reveal the tight intermeshing of political, social, and economic forces in their development and administration over a four hundred-year span.

The discussion of the development and administration of the shrine's endowments thus becomes a springboard to illuminate the political circumstances and historical chronology of the Balkh region during the successive stages in the shrine's development, starting from the time of the Timurids at the end of the fifteenth century, through the period of Jani-Begid and Tuqay-Timurid Uzbek rule in the sixteenth and seventeenth centuries respectively, the Nadirid occupation from 1737 to 1747, the period of independent amirid control in the eighteenth century, and ending with the period of Afghan rule from the annexation of Balkh in 1848 until the end of the nineteenth century. The function of these historical excursions is to explain the political and economic impact on the shrine of the perennial tension in medieval Central Asian his-

tory between the decentralizing trend inherent in steppe practices and Chingizid traditions, as exhibited first and foremost by the autonomy of local *amirs*, and the centralizing policies required for the formation of a centralized bureaucratic state on the Perso-Islamicate model. The book is therefore not just a detailed history of the development and administration of the ʿAlid shrine at Mazar-i Sharif, but also the most sophisticated treatment to date of the political history of post-Timurid Central Asia in general and of the Balkh region in particular.

Building on the contributions to the study of *waqf* in Central Asia by scholars writing in Russian, most notably O. D. Chekhovich, A. Davydov, and R. Mukminova, and in other parts of the Islamic world by such scholars as M. Köprülü and G. Baer, McChesney makes impressive use of a wide range of historical, historico-geographical, and biographical sources, many still in manuscript form and held in Uzbek and Tajik libraries, such as *Mudhakkir al-ashab* and *Rawdat al-ridwan*. Very insightful is his insistence on the importance of the Hanafi legal literature in explaining the workings of *waqf*, although his approach to the utilization of the collections of *fatwas* is unnecessarily cautious, for there can be no doubt that they did in fact record actual cases. While he makes good use of *al-Fatawa al-ʿAlamgiriyyah* which was compiled in India, more relevant would have been *al-Fatawa al-Shibaniyyah* or *al-Fatawa al-Subhaniyyah*, which reflected conditions prevailing in Central Asia. Proof of this is the valuable piece of information provided by Chekhovich in her article on works of *fiqh* and *shurut* in Transoxiana, in which she drew attention to a document in *al-Jawamiʿ al-ʿaliyyah fi'l-wathaʿiq al-sharʿiyyah* by ʿAlī b. Muhammad ʿAlī al-Khwarazmi (the author of *al-Fatawa al-Shibaniyyah*) that recorded the legal procedure by which Sultan Husayn Bayqara sold crown lands in the Balkh region and repurchased them as his own private property, presumably for

* Permission to reprint a book review in this section may be obtained only from the author.

the purpose of converting them into *waqf* for the shrine.¹ This invites comparison with the procedure, described by McChesney, by which Imam Quli Khan privatized state lands for subsequent conversion into *waqf* (p. 16).

One of the strongest points of McChesney's study of the endowments of the ^ḤAlid shrine is the way in which it highlights the importance of the hydrology of the Balkh region, since the irrigation canals themselves, together with the agricultural lands they watered in the immediate vicinity of the shrine, constituted the bulk of the shrine's endowments, and he even provides a map of the Hazhdah Nahr system. In order to get a better idea of its development it would have been useful to compare the state of this system in the sixteenth and seventeenth centuries with that in the first half of the fifteenth, as described by Hafiz-i Abru in his geography of Khorasan.² More importantly, rather than treat the development of the Hazhdah Nahr system in isolation, parallels could have been drawn between it and other irrigation systems that were established or restored by the Timurids and that went hand in hand with what appears to have been a systematic policy of shrine development in Khorasan. The most striking example of such a parallel would be the shrine of ^ḤAbd Allah Ansari at Gazurgah outside Herat, that was watered by the Juy-i Sultani canal dug during the time of Sultan Abu Sa^ḥid. Since it represented the most important shrine complex in the Timurid capital, it must have served as the immediate model for the ^ḤAlid shrine at Balkh. Even the names of their chief canals—Sultani and Shahi respectively—were similar, since both alluded to the fact that they had been developed on royal initiative.

McChesney is careful not to establish a cause and effect relationship between an economy based on irrigated agriculture and political authority. Rather, he concentrates on the pivotal role played by the shrine's managers, particularly the Ansari family who controlled its administration from at

least the seventeenth century, and he masterfully shows just how varied and complex its relationship was with the political authorities in Balkh and later in Bukhara. He illustrates graphically the concern of its members for protecting the shrine against the loss of economic prerogatives in which they had a personal stake and their accommodation to political realities in order to guarantee the security of its endowments and the continuation of those prerogatives. McChesney thus provides a fascinating glimpse into the history of a non-*sayyid* and non-*shaykh* family of managers who all too often have remained anonymous in the contemporary chronicles.

But the nagging question of the origins of the Ansari family remains. The claim made by its members in the seventeenth century that they were descended from a certain Abu'l-Hasan Ansari who had been related on the paternal side to ^ḤAbd Allah Ansari, the great eleventh-century Sufi *shaykh* of Herat, is certainly more than "problematic." It was clearly a fiction promoted by them to enhance their exclusive hereditary position as administrators of the ^ḤAlid shrine, and it is for this reason that they so eagerly sought confirmation of it from Subhan Quli Khan. Had this Abu'l Hasan Ansari actually been related to ^ḤAbd Allah Ansari, the fact would not have gone unrecorded in the rich biographical literature of the late Timurid period, particularly since Sultan Husayn Bayqara himself claimed to be distantly related to him. The name Ansari was not as common in the fifteenth century as McChesney suggests, and his use of Herat's epithet as "the little garden of Ansaris" (p. 45) to indicate the family's possible connections to the city is anachronistic, since it was not coined in the seventeenth century by Qatī^ḥi Harawi but appears already in Jami's *Nafahat al-uns* at the end of the fifteenth century where it is used in reference to a period even pre-dating ^ḤAbd Allah Ansari.³

At the same time that he admits that the Herati origins of the Ansari family are obscure, McChesney makes a tantalizing connection between it and the anonymous "reliable stewards" who were sent by Sultan Husayn, apparently from Herat, to administer the ^ḤAlid shrine at the time of its establishment. It is by making such carefully

¹ O. D. Chekhovich, "Cherty èkonomicheskoi zhizni Maverannakhra v sochineniiakh po fikku i shurutu," in *Blizhnii i Srednii Vostok Tovarno-denezhnye otnosheniia pri feodalizme* (Moscow, 1980), pp. 227–28.

² See Dorothea Krawulsky, ed. and trans., *Horāsān zur Timuridenzeit nach dem Tārih-e Hāfez-e Abrū*, 2 vols. (Wiesbaden, 1982–84). For the Balkh region, see vol. 2, pp. 50–53.

³ ^ḤAbd al-Rahman Jami, *Nafahat al-uns*, ed. Mahdi Tauhidipur (Tehran, 1336/1958), p. 362.

creative statements that do not exceed the bounds of the data available to him that McChesney stimulates his reader to explore further the tentative connections he has made, and this reviewer was no exception. Although the family's possible relationship to 'Abd Allah Ansari can be discounted, can the same be said of its association with his shrine? In other words, could not the origins of the Ansari managerial family of Balkh be traced back to the administration of the Ansari shrine in Herat that, as already mentioned, must have served as the model for the 'Alid shrine? It is entirely plausible that the ancestors of the Ansaris of Balkh had originally been middle-level managers at the Ansari shrine in Herat who, after having been transferred to the administration of the newly established shrine at Balkh by Sultan Husayn, retained the epithet "Ansari" as a mark of their former association with the prestigious Ansari shrine which must have represented something like the "Harvard School of Shrine Management" of its day. Two hundred years later, when the memory of their real origins had faded, they extended their original "administrative" epithet to include the claim to actual descent from 'Abd Allah Ansari. Since they could no longer remember the name of their original ancestor from Herat, they fabricated for him the name "Abu'l-Hasan" that is in itself a dead giveaway, since it is nothing but the patronymic (*kunya*) of 'Ali b. Abi Talib himself! Perhaps such biographical sources as *Tarikh-i mazarat-i Balkh*, written at the end of the sixteenth century, could provide some further clues about the family's links to Herat and the Ansari shrine.⁴

While McChesney outlines the combination of charitable and political forces that lay behind the original foundation of the shrine, he does not delve into the economic motives, even though he states that the shrine became a "formidable economic force in the region." There is too much evidence for collusion among members of the Timurid royal family and administrative and spiritual elite of Herat for the pious tale of its "miraculous rediscovery" to be taken at face value. Note the critical role played by Sultan Husayn's brother, Bayqara Mirza, who was con-

veniently governor of Balkh at the time; the fact that it was a disciple of 'Abd al-Rahman Jami who wrote the pamphlet recounting the tale of the tomb's rediscovery; that the persons who figure in this tale, notably the mysterious descendant of Bayazid Bastami, do not appear to have been real, at least there is no corroborating information about them in the sources of the period; and finally, and most telling, when a popular faction later discovered a new 'Alid site, the rival movement was quickly suppressed by Sultan Husayn. The obvious economic benefits that would have accrued to Sultan Husayn Bayqara and the Timurid elite of Herat as a result of their perpetrating what can only be called a monumental hoax deserved to be emphasized.

In view of the complete lack of *waqf* documents relating to the initial, crucial period of the shrine's establishment, and an uneven documentary record for subsequent periods starting with the *manshur* of 1668–69, it is a tribute to McChesney's ability to interpret his sources so conscientiously and creatively that he is able to reconstruct so much of the history of the shrine over four hundred years. Naturally, some of his conclusions remain speculative and open-ended, but these invariably indicate directions to be taken in further research. But while the lack of documentation relating to *waqf* is a general problem for post-Mongol Iran and Central Asia, it may be compensated for in part, particularly in the case of the Timurid period, by the many collections of *insha* (chancellery documents and model letters) that date from it or relate to it, such as those compiled by Mu'īn al-Din Isfizari, 'Abd Allah Marwarid, and Khwandamir, among others. To illustrate the type of information these may yield, the *Sharaf-namah* of Marwarid contains a document issued by Sultan Husayn Bayqara to Darwish 'Ali Kukaltash, the brother of the famous 'Ali Shir Nawa'i, naming him as the developer of the Faydabad canal that formed part of the Hazhdah Nahr system, outlining the procedure by which he converted it into *waqf*, and detailing its exemption from specified taxes. It also states that Darwish 'Ali was the builder of a *ribat* at the shrine.⁵ Further exploitation of

⁴ For a reference to this work, see Ch. A. Stori [C. A. Storey], *Persidskaia literatura. Bio-bibliograficheskii obzor*, trans. and rev. Iu E. Bregel', 3 vols. (Moscow, 1972), vol. 2, p. 1053.

⁵ Hans Robert Roemer, *Staatsschreiben der Timuridenzeit. Das Šaraf-nāmā des 'Abdallāh Marwārid in kritischer Auswertung* (Wiesbaden, 1952), pp. 79–82.

these invaluable sources would add greatly to our knowledge of the history not just of the ʿAlid shrine, but of other Timurid shrines as well.

This brief review cannot do justice to the multifaceted nature and complexity of McChesney's study, which also establishes the succession of the Ansari *mutawalli* family, clarifies many problems in the chronology of the Jani-Begids and Tuqay-Timurids (often based on numismatic evidence), and explains many technical terms connected with irrigation, land tenure, and taxation. While successfully addressing the many questions it poses, like any first-rate piece of research, it continually raises new ones, making this book a must for those working on *waqf*-related studies and on the history of medieval Iran and Central Asia in general. The ubiquity of the institution of *waqf* in Islamdom makes it an extraordinarily important, yet at the same time forbidding, topic, and it is only through serious and conscientious analyses such as McChesney's that we can begin to grasp the full range of its legal, social, economic, and political implications in various Islamic societies.

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Princeton Papers in Near Eastern Studies.

No. 1. 1992. Edited by CHARLES ISSAWI and BERNARD LEWIS. Princeton: Darwin Press, 1993. Pp. iii + 118.

This new series aims to publish serious articles on any topic in Near Eastern studies, from pre-Islamic to modern times and in any discipline, regardless of length or whether highly specialized. The opening number is finely produced—clearly laid out and printed on acid-free paper and securely bound. It contains five articles, all of excellent quality: Ross Brann, "Power in the Portrayal: Representations of Muslims and Jews in Judah al-Harizi's *Tahkemoni*"; Michael Cook, "Eschatology and the Dating of Traditions"; Halil İnalçık, "Comments on 'Sultanism': Max Weber's Typification of the Ottoman Polity"; Charles Issawi, "Iraq, 1800–1991: A Study in Aborted Development"; and Jonathan Katz, "Visionary Experience, Autobiography, and Sainthood in North African Islam."

Princeton Papers in Near Eastern Studies, with its refreshing openness to publishing even lengthy and technical studies, is a welcome addition to the professional series in the field.

FRED M. DONNER

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The Invisible Conquest: The Ontogenesis of Sixth and Seventh Century Syria. By PETER PENTZ. Copenhagen: The National Museum of Denmark/Collection of Near Eastern and Classical Antiquities, 1992. Pp. 96 + 75 figs.

Despite periods of historiographical self-doubt, the post-*Hagarism* generation of Late Antique/Early Islamic scholarship continues to produce its share of interesting work, both historical and archaeological. The present work falls mostly into the latter group, being a synthetic overview of much of the substantial archaeological data relevant to the period.

The author's main point is not a radical one: archaeologically speaking, the Islamic conquest is "invisible," and thus older interpretations of devastation and disjuncture are inadequate. These are points worth repeating but hardly pioneering. The author's conclusion, that, "matters of preservation of [socio-economic] mutuality played a much more dominant role [in initiating the Islamic conquests] than the hope of requiring [*sic*] wealth and than the will of creating a Muslim empire" can be seen as a variation of the "economic explanation" that remains open to criticism.

While the coverage is by no means entirely complete, it is commendable, using data from Antioch to Aqaba and Damascus to Dibsī Faraj. For this reason, the author's overall conclusions, despite some historical inaccuracies, are attractive. Moreover, the author adds his share of compelling thoughts, such as the correlation between industrial activity and the "breakdown" of orthogonal planning (chap. 4). He also wisely states that any interpretations about disjuncture following the Abbasid revolution are likewise open to debate.

In short, *The Invisible Conquest* is not a particularly revelatory contribution to our under-

standing of late Antique or early Islamic Syria. In fact, it is most useful as a synthesis of archaeological evidence which generally conforms to the contemporary interpretation of the period, as against more radical (and archaeologically questionable) views. Despite a necessary reliance on secondary literature, occasional insights by the author are original and thought-provoking. Finally, the tantalizing addition of photos from the collection of early Islamic artwork excavated from Hama suggests that the author's much-awaited volume on the medieval strata from the city's citadel will not be a disappointment.

PAUL M. COBB

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Documents de l'Islam médiéval: Nouvelles perspectives de recherche. Edited by YŪSUF RĀĠĪB. Cairo: Institut Français d'Archéologie Orientale, 1991. Pp. 194 + plates + figs.

The importance of documentary evidence, particularly in the field of medieval Islamic history, is a fact that cannot be overstressed. The need for contemporary, nonliterary sources is a strongly felt one in this field, even for a region such as Egypt where, despite the relative abundance of such sources in the form of papyri and paper documents, most such material is unpublished or impenetrable to the nonpapyrologist. This slim volume is one small gesture toward resolving some of this difficulty and includes ten studies of particular kinds of "documentary" evidence including papyri, paper, coinage, glass stamps, and archaeological data. The geographical breadth of the work is commendable, given the usual monopoly of Egypt on such matters: the studies discuss sources relating to Tunisia, the Bilād al-Shām, Arabia, and Iran, as well as Egypt, from the rise of Islam onward.

Yūsuf Rāġib's "La plus ancienne lettre arabe de marchand," is a brief but interesting study of a document which demonstrates the mechanics of a system of credit used by merchants traveling between Egypt and Ifriqiyya in the early Islamic period. While the document is undoubtedly very early, however, the author's dating is

uncertain as it is based solely on paleography and not on any explicit information.

Gladys Frantz-Murphy, "Conversion in Early Islamic Egypt: The Economic Factor," is a sophisticated study of papyrological evidence which the author suggests points to a "social revolution." Perhaps more accurately described as a "social change," this resulted from the removal of local Coptic élites from positions as tax collectors during a drive toward greater centralization in the Marwānid period. This policy in turn may imply a decline in the fortunes of the Coptic population and an increased incidence of conversion, swelling the ranks of the Muslim ruling stratum.

A. H. Morton's article "Hisba and Glass Stamps in Eighth- and Early Ninth-Century Egypt" assembles the documentary evidence relating to the post of *muhtasib* and is thereby able to flesh out our knowledge of this civil servant's function and position in the administrative hierarchy in the early Islamic period. Rather than a simple calque on the Classical *agoranomos*, or the full-fledged moral policeman of later periods, Morton sees the early Islamic *muhtasibs* as functionaries in the financial department, responsible for the issuance and certification of weights and measures used in the market place and perhaps for retail price control. In addition, he includes a handy list of *muhtasibs* (as he has identified them) of Egypt documented from glass stamps ranging from 714–95 A.D.

Michael L. Bates, "Coins and Money in the Arabic Papyri," is a very useful summary of the monetary history of Egypt to the Fatimid conquest. It is also the most definitive statement to date on the actual use of coinage in early Islamic Egypt. Bates marshals evidence from glass weights, papyri, and literary sources to clearly explicate the procedures involved in monetary exchange in this period characterized by a largely unregulated monetary economy, laying particular stress on the practice of weighing coins because of their often fluctuating value. Along the way, we are given a taste of the varying weight standards for gold, silver, and copper issues, bringing us a step closer to using quoted exchange rates as chronological indicators.

Pedro Chalmeta, in his article "Monnaie de compte, monnaie fiscale et monnaie réelle en

Andalus," renders the same service, for our understanding of the use of money in medieval Andalusia. Chalmeta observes the common system of trimetallism (copper/bronze, silver, gold) but with a system of "trifunctionalism" that renders the use of money more complex than usually assumed. In such a system, different varieties of coinage tended to have different functions within the Andalusian economy. For example, gold dinars were almost exclusively "account money" used in government tax assessments, or in special cases such as largesse or tribute, but almost never as "real money" in day-to-day transactions.

D. S. Richards's "Fragments of a Slave Dealer's Day-book from Fustāt" presents the accounts of one week of a Muslim slave dealer in Fustāt. The document is plausibly dated to the early eleventh century A.D. and may even mention an individual known from literary sources. In general, the document provides information which conforms to the picture of the Fustāt slave-trade provided by S. D. Goitein's study of the Geniza documents. Earlier than the predominantly late eleventh–twelfth-century documents that Goitein used, however, it is therefore of special value.

Geoffrey Khan, in "A Document of Appointment of a Jewish Leader in Syria Issued by al-Malik al-Afḍal 'Alī in 589 A.H./1193 A.D.," presents a copy of a decree relating to the Jewish community of Damascus during the reign of the Ayyūbid prince al-Afḍal 'Alī, the eldest son of Saladin. It is dated to A.H. 589, the year of Saladin's death, and the very year that al-Afḍal 'Alī assumed full control over his Syrian appanage. Before the reconquest of Syria and Palestine by Saladin in the twelfth century, the Jewish community of the Damascus region was led by the Palestinian Gaonate, while after the Mamlūk conquest of Syria in the thirteenth century, it was made subordinate to the Nagīd of Egypt, making this document precious evidence of a brief period of administrative independence for the Damascus Jewish community.

Monika Gronke's "Les notables iraniens à l'époque mongole" is a short introduction to the two hundred-odd documents discovered in the Šafavid sanctuary in Ardabil in 1970 that relate

to the period of Mongol rule (thirteenth and fourteenth centuries). Based on these documents, Gronke presents a description of the social and commercial activities of the small number of wealthy families that dominated the city at this time, including Shaykh Šafi and his descendants, the progenitors of the Šafavid dynasty that would, in the not distant future, come to rule all of Iran. This piece is particularly valuable not only as a glimpse of the economic foundations that made the political ascendancy of the Šafavids possible, but also because such documentary evidence is almost unknown from medieval Persia.

Donald Whitcomb's article, "Excavations in the Site of Medieval 'Aqaba" is a concise summary of the findings from the 1986 and 1987 seasons of excavations at the site of the early Islamic city of Ayla located at modern 'Aqaba, Jordan, a site that is almost unique in providing one of the few untrammelled examples of the results of early Islamic urbanization. While much of the information here can be obtained from the more technical preliminary reports already published, this article provides an overview of the dazzling range of artifactual material recovered from the site, and the excavator supplies his own informed insights regarding the site's architectural features, as well as novel interpretations of the city's historical development.

Claire Hardy-Guilbert's "Dix ans de recherche archéologique sur la période islamique dans le Golfe (1977–87)" is a useful summary article synthesizing the results of various archaeological projects working in the Persian Gulf, focusing on sites from the eastern coast of the Arabian Peninsula dating from the eve of Islam to the nineteenth century. The first section deals with material from archaeological excavations, and the author has a number of interesting conclusions about local ceramic production and the local patterns of ceramic trade with China throughout the period. The second section is a preliminary inventory of the standing monuments of Qatar most in imminent danger of demolition.

In short, in addition to the fact that all these studies are distinguished by their noble intent to contribute to the use of documentary evidence in medieval Islamic history, they are also ten

very fine pieces of scholarship in their own right, combining sound analysis, clarity of presentation, and the excitement of new discovery.

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The Reforming Kings: Cults and Society in First Temple Judah. By RICHARD HARLIN LOWERY. *Journal for the Study of the Old Testament Supplement Series*, no. 120. Sheffield: JSOT Press, 1991. Pp. 236. \$50.

As stated in the preface, this volume is a revision of a (1989) Yale Ph.D. dissertation advised by Robert Wilson. A comparison with the dissertation itself reveals that, aside from correcting typos and reining in a penchant for colloquialisms, the conclusion alone has seen substantive revision; the book contains a comprehensive bibliography with scriptural and author indexes compiled by the author. Lowery's enterprise, the synthesizing of a social history of Deuteronomistic theology in the monarchic period, is clearly voiced and consistently addressed, from the substantive introduction to the conclusion chapter. Chap. 1, "Monarchy and Economy," examines land use, real estate ownership, royal and cultic taxation, and the royal ideology and kinship structures which weave a complex fugue through the Old Testament narratives. Chap. 2 examines the biblical narratives of the cultic activities of Rehoboam, Asa, Jehoshaphat, Athaliah, Joash, and Amaziah. Chaps. 3 through 6 deal with the reigns of Ahaz, Hezekiah, and Josiah, respectively. Lowery maintains that "Assyrian imperialism provides the context for the development of deuteronomism in Judah" (p. 214), specifically, that Assyrian extortion of tribute, *corvée*, and other vassal obligations exacerbated tensions already existing between Judahite monarchy and its subjects, ultimately leading to the formulation of the Deuteronomistic vision of society and its partial manifestation in the reform program of Josiah.

Like so many studies in the biblical field today, Lowery endeavors to write an original history of the late monarchic period by combining

his own redaction-critical readings of the texts of 2 Kings and Chronicles with a critical survey of the secondary literature; there is virtually no independent examination of extrabiblical primary texts or pertinent archaeological finds. On the positive side, the introduction provides an up-to-date summary of theories regarding the composition and redaction of the Deuteronomistic History. Lowery has performed a useful service for the English-reading constituency by introducing the important monographs of H.-D. Hoffmann¹ and H. Spieckermann² into his discussion of the salient biblical texts and the vexatious issue of Assyrian cultic influence. The author is refreshingly cognizant that the "official" religion of monarchic Judah was a cult of many gods, with Yahweh as the paramount god of the nation (pp. 119, 139), and, after exploring the massive literary stylization of 2 Kings' description of Manasseh, rejects the popular "rampant syncretism" interpretation of the reign of this king because the cult polemic oppressively outweighs the historical content (p. 189). He is to be commended for identifying the majority of the cult practices abrogated by Josiah in 2 Kings 23:4-20 as "indigenous" (p. 203) but, regrettably, does not explore the possibility that their very recognizability as West Semitic cults may have more to do with Deuteronomistic theological *Tendenz* than late Judahite history.

On the negative side, Lowery poses a series of historical questions the answers to which are artificially circumscribed by his reliance on secondary studies and basic conviction in the historicity of the biblical narratives, repeated disclaimers notwithstanding. For instance, his conception of the Assyrian overlordship of Judah as a period of worsening socioeconomic conditions for all classes, save the privileged few, may need adjustment in light of the immense oil

¹ Hans-Detlef Hoffmann, *Reform und Reformen: Untersuchungen zu einem Grundthema der deuteronomistischen Geschichtsschreibung*, Abhandlungen zur Theologie des Alten und Neuen Testaments, no. 66 (Zurich, 1980).

² Hermann Spieckermann, *Juda unter Assur in der Sargonidenzeit*, Forschungen zur Religion und Literatur des Alten und Neuen Testaments, no. 129 (Göttingen, 1982).

manufacturing complex recently unearthed at Tel Migne-Ekron³ and evidence of growing urban complexity and expansion in trade goods in contemporary Edomite territory.⁴ Given the historical patterns of resistance to Assyrian expansion in Western Asia, it is reasonable to speculate with Lowery that the majority of the Judahite populace took umbrage at the burden of imperial tax and *corvée* and that, in general, vassal-state economies shifted towards a surplus and trade-oriented mode of production. The author's failure to access independently the archaeological picture and optimism in the historical transparency of isolated prophetic polemics and cult reform narratives of 2 Kings, however, vitiates his bold claim that "the economic pressure of meeting obligations to the empire sent Judah headlong into social crisis" (p. 130). Lowery's discussion of the "high place" sanctuaries (pp. 75–80) demonstrates no awareness of the extensive treatment by Barrick,⁵ and he follows the traditional scholium of קדשים/קדשות as "cult prostitutes" (pp. 70, 88–93) without any indication that this interpretation has been seriously challenged.⁶

Again, reliance on secondary literature may have detoured Lowery from bringing Egypt into his analysis at significant points. In his discus-

sion of the fiscal and administrative structures of the Divided Monarchy, it would be logical, given the ancient inclusion of Syria/Palestine within the active Egyptian *Kulturkreis*, to explore the possibility that Egyptian administrative structures might offer useful parallels with those of Israel and Judah. While Lowery is aware of waning Assyrian power during Josiah's reign, he does not appear to grasp implications of an Egyptian assumption of Judahite overlordship from Assyria. If, for instance, the Josianic cult reform took place well after the translation of Judah from an Assyrian into an Egyptian vassal state, then the quest for literary vestiges of the eradication of Assyrian imperial cult impositions from the temples and shrines of Judah loses its cogency. Finally, given extensive evidence of Egyptian deities in glyptic and other iconographic artifacts of Iron Age Palestine, and the proximity of this "Great Tradition" to the urban centers of Judah, it is rather suspicious that nothing in the 2 Kings narrative of the Josianic cult reform hints of Egyptian cultic origin. If the authors/redactors of 2 Kings were uninformed regarding Egyptian cults in seventh-century Judah, how much more probable is it that they preserved a knowledge of Assyrian religious practices, whether politically imposed or voluntarily adopted?

Lowery breaks no new ground in his consideration of Assyrian cultic influence in the vassal states, including Judah (pp. 135–40, nevertheless a useful summary of the major research on the topic in the last ninety years). While he rejects most of the earlier scholarly efforts to infiltrate Assyrian deities and cult practices into the narratives of 2 Kings, he nevertheless isolates "astral cult practices from Assyria" (never defined) in the rooftop altars of Ahaz (p. 205) and allows the possibility that the chariots of the sun in 2 Kings 23:11 and the incense offered to Baal and major celestial objects in v. 5 could refer to either indigenous cults or Assyrian imports (pp. 205–6). In truth, with the exception of

³ Seymour Gitin, "Tel Migne-Ekron: A Type-Site for the Inner Coastal Plain in the Iron Age II Period," in S. Gitin and W. G. Dever, eds., *Recent Excavations in Israel*, Annual of the American Schools of Oriental Research, no. 49 (Winona Lake, Indiana, 1989), pp. 23–58.

⁴ John R. Bartlett, *Edom and The Edomites*, Journal for the Study of the Old Testament, Supplement Series, no. 77 (Sheffield, 1989), pp. 136–43; Stephen Hart, "Some Preliminary Thoughts on Settlement in the Southern Edom," *Levant* 18 (1986): 54–58. For a promising understanding of the reasons behind Jerusalem's growth in the Assyrian period very different from that of Lowery, see now Thomas L. Thompson, *Early History of the Israelite People: From the Written and Archaeological Sources*, Studies in the History of the Ancient Near East, no. 4 (Leiden, 1992), pp. 333–34, 343.

⁵ W. Boyd Barrick, "The Funerary Character of 'High-Places' in Ancient Palestine: A Reassessment," *VT* 25 (1975): 565–95; idem, "The Word *BMH* in the Old Testament" (Ph.D. diss., University of Chicago, 1977); idem, "What Do We Really Know About 'High-Places'?", *Svensk exegetisk Årsbok* 45 (1980): 50–57.

⁶ Wolfram von Soden, "Zur Stellung des 'Geweihten' (*qdš*) in Ugarit," *Ugarit Forschungen (UF)* 2

(1970): 329–30; Hans M. Barstad, *The Religious Polemics of Amos: Studies in the Preaching of Am 2,7b-8; 4,1-13; 5,1-27; 6,4-7; 8,14*, Supplements to Vetus Testamentum, no. 34 (Leiden, 1984), pp. 28–29; Mayer I. Gruber, "Hebrew *qđēšāh* and Her Canaanite and Akkadian Cognates," *UF* 18 (1986): 133–48.

Šamaš the sun god, Sin the moon god, Ištar, associated with Venus in her morning and evening manifestations, and the collective Sebetti, associated with the Pleiades, there is strikingly little textual evidence for the worship of astral entities in royally sponsored temples in Assyria. Despite the East Semitic origin of the word, the semantic development of Hebrew *mazzālôt*, "planets, (zodiacal) constellations," 2 Kings 23:5 has no parallel in its Akkadian cognate; Akkadian boasts perfectly straightforward expressions for "planet", *bibbu*, and "(zodiacal) constellation(s)", *lumāšu*. The concept of zodiac is unattested before 555 B.C.E.—if the biblical authors intended that as the meaning of *mazzālôt*, then the term is anachronistic for monarchic Judah. While it is entirely plausible that the historical Ahaz and other Judahite kings subject to Assyria emulated aspects of Assyrian astronomical observation and celestial divination, the cult narratives of Hezekiah, Manasseh, and Josiah in 2 Kings must be mercilessly ransacked for "evidence," however ambiguous, like the rooftop altars of Ahaz, to support a historicist's reading of the Deuteronomistic History, a history which shows neither political nor cultic interest in Assyrian affairs following Sennacherib's anachronistic parricide until Josiah's death. Had rooftop altars been mentioned in connection with the cultic peccadilloes of Ahab, imagine the sophisticated scholarly expositions that might have "demonstrated" Aramaean or Phoenician cultic influence in Israel!

Richard Lowery has written a highly readable social and religious history of Judah, with good coverage of the secondary literature and awareness of the most combustible issues in current scholarship surrounding the Deuteronomistic History. One hopes that a sequel will follow containing the primary research necessary to sustain his conclusions, better demonstrating the powers of critical historical reasoning that glint at several points from the pages of this book.

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In Search of the Indo-Europeans: Language, Archaeology and Myth. By J. P. MALLORY. London and New York: Thames and Hudson, 1989. Pp 288 + 175 figs. \$29.95.

Recent years have seen a renewed interest in the search for the Indo-European homeland. Amid the recent publications in this special field of research, Mallory's book *In Search of the Indo-Europeans* clearly stands out because of its clarity and its wish not to present yet another hypothesis. Rather, it follows "the general mainstream of 'conventional wisdom'" and attempts "to provide a general . . . survey of the current state of our knowledge about the earliest Indo-Europeans" (p. 8). As such, one can only admire the author's vast erudition and scholarship, which enable him to cover questions of archeology, comparative linguistics, and many topics of Indo-European culture spread over several millennia and covering very different societies.

After a short "Forschungsgeschichte," the author formulates the Indo-European hypothesis according to which a whole set of languages, ranging from Indo-Aryan and Tocharian in the East to Celtic in the West in the early period and far more dispersed nowadays, presupposes a common ancestor, "Proto-Indo-European," with a population that once occupied a restricted area somewhere in Eurasia roughly between 4500 and 2500 B.C. In the next two chapters, the languages and language groups in Asia and Europe are all reviewed. Especially helpful for the non-specialist reader are the short text samples of one or more languages in each subgroup. It is in this section of the book, however, that the specialist reader may find some minor points of criticism. Any Hittitologist will, for example, protest against the statement: "the Hittites called themselves *nes* and their language *nesili*" (p. 26). How much the Indo-European invaders in Anatolia assimilated with the apparently autochthonous non-Indo-European Hattians is shown by the fact that these invaders adopted the autochthonous name and called themselves "men of Hatti," although their language prevailed and Hattic must have been a nearly dead language in this early period. The name Hattic, however, is reserved for this substratum language, which was mostly restricted to use in

religious formulas. They called their own language "the language of the city of *Nesa*." This reflects the Hittite historical tradition according to which King Anitta made *Nesa* the center of his many conquests in Anatolia, thereby laying the foundations of what was going to be the Hittite Empire. *Nesili* is the adverb meaning "in the language of the city of *Nesa*." Similarly, there are few Hittitologists who nowadays would refer to the Mita-text (CTH 146) as being "late Hittite" (p. 33).

After a rough sketch of the linguistic background within each subgroup and its chronology, special attention is paid to what conclusions can be drawn from the linguistic and archaeological material for the immediate prehistory of a given group of languages. The material remains comprise the different types of pottery, burial customs, animal remains, destruction layers, and the like. Here, however, the ever-recurring and probably quintessential problems are posed: to what extent can and may the material remains of a prehistoric culture be identified with a (later) linguistically defined ethnic group, and how does one tell whether traces of destruction in an archaeological level imply a violent intrusion with subsequent linguistic differentiation? There are a few conclusions which can be drawn. The various non-Indo-European substrates in western Asia, including India, all seem to point to the Indo-Europeans as intrusive. In other words, the Indo-European homeland is not likely to have been in either Anatolia, Mesopotamia, or India. The situation for Europe, however, seems reversed, and a more static picture presents itself. Of course, migrations have taken place there too, but these movements did not necessarily originate from outside Europe. As a result, the Indo-European homeland apparently can be found somewhere in Europe. Two main areas are thereby singled out as possible candidates. One is the northern European region covering modern Denmark, Holland, Germany, Poland, and the Baltic states and constituting the so-called Corded Ware Horizon, named after a special kind of pottery common to this area dating from the late fourth millennium on. The other region comprises the "Balkan-Danubian complex," the area from which many Indo-European language groups seem to have originated.

However, the author first deals with Proto-Indo-European culture, as far as it can be reconstructed on the basis of the words that are shared by the different groups and thus with reasonable certainty can be assigned to the protolanguage. These words include various kinds of vegetation, especially trees, and animals, either wild or domesticated, as well as agricultural and metallurgical terms and kinship vocabulary. Unfortunately, no unequivocal evidence pointing to a specific area of origin is gained, but the material seems to supply chronological information and points to the earliest possible date as being around 4500–4000 B.C. Moreover, the culture in question can be characterized as a late Neolithic society that had already gone through the so-called secondary products revolution, i.e., it knew how to make dairy products, wool, and textiles, and all sorts of wooden objects such as ploughs and wheeled vehicles. The end of this Proto-Indo-European culture can be dated to somewhere in the first half of the third millennium. The degree of linguistic differentiation already reached in, for instance, Anatolian, Greek, and Indo-Iranian in the second millennium precludes any later date.

Returning to archaeology, the author cautiously confesses that he himself follows the theory advocated for more than two decades by the Lithuanian scholar Marija Gimbutas. According to this theory, the Indo-European homeland is probably to be found in the Pontic-Caspian region, possibly even extending somewhat further east into the Urals. The several cultures found there are subsumed under the general heading "Kurgan tradition": "The capsule image of the Kurgan tradition is a warlike pastoral society, highly mobile, . . . which employed both wagons drawn by oxen and rode horses" (p. 183). The name Kurgan is derived from the burial customs and indicates a low sort of tumulus grave often found in this area. Whatever one may think of this "capsule image," most of the evidence drawn from Indo-European vocabulary concerning landscape, climate, fauna, and flora does seem to fit this area in general and the findings of its archaeological sites in particular. Among these, special attention is paid to the obviously important role of horses and wheeled vehicles.

But what then of the "Corded Ware Horizon," the mainly third-millennium Northern European cultures mentioned above as the other possibility for the Proto-Indo-European homeland? In his last chapter before the epilogue, Mallory discusses, at some length, the many options and problems connected with this question: "an endless series of cul de sacs" is presented to the reader and no solutions are offered. Although this may not seem very satisfying, it does convey to the reader how difficult it is to reach any degree of certainty in these matters.

This last aspect of Mallory's book is typical: the highly complex questions of the origin of Indo-European languages and the culture of our Proto-Indo-European ancestors is most reliably examined and discussed from all possible angles. Cautiously taking a stand himself, the author nevertheless does not force his preferred view on the reader, thereby providing a trustworthy and valuable handbook for a long time to come.

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Aus Sprache, Geschichte und Religion Babylo-niens: Gesammelte Aufsätze. By WOLFRAM VON SODEN. Edited by LUIGI CAGNI and HANSPETER MÜLLER. Istituto Universitario Orientale, Dipartimento di Studi Asiatici, Series Minor, vol. 32. Naples: Istituto Universitario Orientale, 1989. Pp. x + 368.

The volume reviewed here contains twenty-three essays by the eminent German Assyriologist Wolfram von Soden. Twenty of these have been published before and are reproduced here virtually unchanged.¹ The last three articles, however, have been prepared specifically for inclusion in this collection. The first one of these, "Nimrod" (p. 337), is an update to a brief note published in 1960;² the second, "Die Igi-götter in altbabylonischer Zeit und *edimmu* im Atramḫasis-Mythos," is a new synthesis updat-

ing, and partly replacing, two earlier articles by the author which he did not want to have reprinted in their original format.³ Finally, a study called "Dolmetscher und Dolmetschen im Alten Orient" resumes von Soden's earlier discussion of the topic from 1959.⁴

This book is the second such collection of articles by the author, honoring a man of immense productivity and unusually broad research interests.⁵ Some of the studies reprinted here are more than fifty years old but are still of much more than just historical interest in our field. The list of titles also includes some recent works, the latest one bearing the date "1985." Although only a few of the articles were originally published in what Assyriologists might think of as "obscure" places, the collection will certainly make some of von Soden's most influential contributions more easily available to scholars from neighboring disciplines. The editors have earned our sincere thanks for their diligent selection of papers and flawless production of the book. But what is even more important, the astonishing breadth, insight, and lasting value of von Soden's scholarly output, eloquently exemplified on the pages of this volume, remain the focus of envy and admiration for all of us who have learned so much from his writings.

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³ "Die Igi-götter in altbabylonischer Zeit," *Iraq* 28 (1966): 140 ff., and "Babylonische Göttergruppen: Igi und Anunnaku. Zum Bedeutungswandel theologischer Begriffe," *CRRA* 11 (1964): 102 ff.

⁴ In *Reallexikon für Antike und Christentum* (Stuttgart, 1950-), vol. 4, pp. 30 f.

⁵ The first, called *Bibel und Alter Orient*, and also edited by H.-P. Müller, has been published as *ZAW Beiheft* 162 (Berlin, 1985); its twenty-seven articles focused mainly on topics of interest for Old Testament studies.

'*Herzberuhigungsklagen*': *Die sumerisch-akkadischen Eršarunga-Gebete.* By STEFAN M. MAUL. Wiesbaden: Otto Harrassowitz, 1988. Pp. xi + 469 + 69 pls. DM 128.

This is a rather brief (and somewhat belated) note to draw attention to an important book on a

¹ For the titles, and a complete bibliography, see the list on pp. ix-x of the book being reviewed.

² In *Die Religion in Geschichte und Gegenwart*, 3d ed. (Tübingen, 1957-), vol. 4, cols. 1496 f.

hitherto neglected genre of Mesopotamian religious texts. Stefan Maul's edition of the *Eršahunga* prayers and related material fills a major gap in our knowledge and evaluation of late Sumero-Akkadian cultic poetry. Assyriologists, Biblical scholars, and historians of literature and religion, will likewise be grateful to the author for his efforts, to provide new, and at the same time often first, editions of all related cuneiform texts published to date, and also to make available many fragments which, until now, had remained unpublished. Most of the tablets come from Aššurbanipal's library at Nineveh and are now in the British Museum. All of these, as well as a few more from Aššur, Uruk, and Babylon, now housed in Berlin, were collated (and most of them actually recopied) for the present edition, while the single remaining text in Baghdad (IM 58080) had to be edited from the published copy, TIM 9:32.

The textual material thus presented belongs to three topical groups of very uneven size. The bulk of the book, called "Hauptteil" and comprising more than 300 pages, contains the complete edition of all *Eršahunga* prayer-laments known today.¹ These are bilingual compositions mostly preserved on tablets from the first millennium² and addressed to individual gods and goddesses, very rarely to groups of deities. Every text is given in transliteration (if there are duplicates, a full score is provided), with translation and commentary. For the convenience of the user, this huge chapter has been arranged in four subsections: (1) prayers to male gods, (2) prayers to goddesses, (3) prayers to unidentified deities, and (4) fragments which resemble the

known *Eršahungas* but cannot (yet) definitively be proven to belong to the genre.³

The other two text groups comprise rituals describing the use of *Eršahungas*, and ancient catalogues listing the prayers by incipit lines. A bit unexpectedly, editions of these sources are tucked away in sections 7⁴ and 8⁵ of the introductory chapter. Although this may have seemed practical because far fewer texts are involved here, it does not really do justice to their respective importance, and full (even if short) sections in the "Hauptteil" should have been devoted to their presentation.

The format of Maul's transliterations differs somewhat from the standard style used by most Assyriologists today. Trying to come as close as possible to the layout of the text on the original, he has spaced out signs, aligned brackets to approximate the shape of the fragments, and even indicated the curvature of tablet edges. For the wording of the texts, he has strictly followed R. Borger's guidelines for transcribing cuneiform documents,⁶ but in addition has inserted sketches of broken or unidentified signs into his transliterations. Since excellent hand-copies of most of the texts are easily accessible within the same volume, all these extra details seem to me to over-

³ It thus seems to me a bit risky to have these numbered "Ešh 105–147," in direct continuation of the numerical sequence adopted for subgroups 1–3. It also remains unclear to me why the siglum "Ešh" has been adopted for all texts from Kuyunjik, while manuscripts from other sites are quoted by publication.

⁴ Note that there is a complete catalogue of all rituals mentioning the recitation of *Eršahungas* but that only selected texts have been edited in full, either because no previous editions were available or because new fragments are published in the book at hand (pls. 1–3, "Rit. 1–9). Note that no. 2.2.2 (p. 31) has now been edited by W. R. Mayer, "Ein neues Königsritual gegen feindliche Bedrohung," *Or.*, n.s., 57 (1988): 145 ff.

⁵ The edition of what remains of these catalogues is complete, but the arrangement is a bit puzzling. Note that, according to n. 109, the fragments "Kat." nos. 1, 2, 7, and 8 belong to one tablet, nos. 4–6 to another, and that no. 3 could be part of either of these, or of a third exemplar. Copies of all eight pieces can be found on pls. 3–6.

⁶ See R. Borger, *Assyrisch-babylonische Zeichenliste*, 2d ed., AOAT 33/33A (Kevelaer and Neukirchen-Vluyn, 1981), pp. 50 f., § 12.

¹ Additional fragments of *Eršahungas* which came to light after completion of the manuscript have recently been edited by the same author in "Zwei neue 'Herzberuhigungsklagen'," *RA* 85 (1991): 67–74.

² The few prayers and laments from earlier periods which show close parallels with the first millennium corpus were, with one significant exception (P. Michalowski, "On the Early History of the *eršahunga* Prayer," *JCS* 39 [1987]: 37 ff.) not explicitly labeled *Eršahunga*. They have not been edited here in full, but an important discussion of these texts and one sample edition are to be found on pp. 9–16.

burden the transliterations a bit and to make them more complicated to read. I must admit, however, that on occasion this format can facilitate further joins and new readings and also helps to reduce the likelihood of rash or sloppy restorations.

The remainder of the introduction deals diligently with problems of provenience, date, language, and style of the individual texts, as well as the history and formal structure of the genre. Maul wisely refrains from expanding his comparison into the Biblical field, but his outline of the facts will most certainly stimulate new studies in this area, for which the book will form an excellent basis.

The volume is rounded out by a complete index of texts utilized, an extensive bibliography, and a full glossary of the vocabulary of the prayers, as it is known today. It seems to me to be a bit unfortunate, however, that this glossary is based solely on Sumerian, and not even a cross-index for the Akkadian equivalents has been provided. It is also a shame that the riches of the philological commentary to the text editions, and its many interesting discussion of Sumerian and Akkadian words and phrases, are not covered here and that the vocabulary of the ritual texts is all but ignored. Furthermore, an index of subject matters of the introductory chapters and commentary would, in my opinion, have been very helpful.

The book is reproduced from a clean, and virtually error-free, typescript. The text editions are fully up-to-date, and I found only very few cases where I disagree with the author about a reading⁷ or interpretation.⁸ In short, it is a plea-

sure to announce this work and to thank a colleague whose first *magnum opus* is surely going to be, for many years to come, the standard edition of a very interesting group of Sumero-Akkadian religious texts.

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guage. Just as a logogram can be read, for instance, in Akkadian or Hittite in a text composed in that language, A.NIR could have thus been understood as a legitimate spelling for /ašer/ in a text in emesal. P. 5, center: kur-dar-gal is not a good example because (a) it does not reflect Akkadian word order and (b) it could well be a correct, though quite artificial, Sumerian habitative noun of the type dub-sar(-gal); originally meaning "Gross-Bergspalter," it might then have been sloppily translated into Akkadian as *mulatti šadī rabūti*, "Grossberg-Spalter." Same page, end: gašān-GĀ can, in the light of the discussion on the following page, be interpreted as a "correct" vocative in /-e/, reading gašān-ġe_x(GĀ).

Babylonian Topographical Texts. By A. R. GEORGE. *Orientalia Lovaniensia Analecta*, vol. 40. Leuven: Department Oriëntalistiek and Peeters, 1992. Pp. xvii + 504 + 58 pls. 6,000 Belgian francs.

This is a volume that Assyriologists have been eagerly awaiting for years. It was well worth the wait.

The major part of the book is a new edition of the text known by its ancient title as tin.tir^{ki} = *bābīlu*. Parts of it have been known since the early days of Assyriology, but George has been able to add many new sources. It consisted of five tablets. So far, no pieces attributable to Tablet III have been identified, but considerable amounts of the other tablets have now been recovered. Approximately 300 lines are preserved, and George estimates that about a quarter of the composition is still missing.

In discussing the date of the composition, George argues for the twelfth century B.C. as the time when the lists which make up the text attained their final form. As others have done, he likewise supports a date of composition for the Babylonian Creation Epic at about the same time

⁷ A few suggestions on the editions of the rituals: on p. 44, Rit. no. 7, l. 6', read: [ina[?] ar]ki riksi tuškēn(KI¹.ZA.ZA). P. 46, STT 232, ll. 12 and 18: (x [x-x-t]i tanadd[i š]ubat([K]I¹.TUŠ) qanē(GI.MEŠ) ina muḫḫi tatarraš, and compare p. 53, in l. 11' and the parallel quoted in the commentary; l. 27: in a ritual concerned with doors, a reading [KÁ AN.AŠ].AM does not seem unlikely; l. 35 f.: ana DI[NGIR] É U DN ta-n[a-dš-š]i; NĪR [GIŠ.NU₁].GAL ina qê kaspi tašakkak. P. 54, Rit. no. 9 l. 13': ina muḫḫišu tanašši in this context must mean "you hold over him;" not "you lift onto his head;" the point is that, just as by using a cloth for grasping his hands, direct contact with the king is to be avoided.

⁸ P. 2, n. 4: emegi spellings in emesal texts may be just a phenomenon of graphemics, and not of lan-

and points out a number of points of contact between the two compositions. He adds that the sheer number of library tablets of Tintir and of school tablets inscribed with extracts shows the popularity of this composition in the scribal centers of the first millennium.

The interest of tin.tir^{ki} = *bābilu* is twofold. It is, first of all, a detailed description of the ancient city of Babylon, enumerating its temples, shrines, streets, walls, etc., in considerable detail. On pp. 369–70 George gives interesting observations on everyday religious life in Babylon (as opposed to the official cult). He has utilized all available archaeological evidence, including recent excavations, which, when combined with the new and corrected textual evidence, gives a much firmer picture of the city as it existed in Neo-Babylonian times. (Some parts of the city are unexcavated, of course, and other areas have probably been lost as the Euphrates changed course.) The main purpose of the list, however, was not topographical but, rather, theological and cosmological.

The second element of interest in this text (and the others edited in this volume) is the nature of the ancient scholarship involved. The left column gives the ceremonial name, usually Sumerian, the themes of which are the epithets similar to those of the Sumerian temple hymns, and the second column then gives an interpretation in Akkadian of the Sumerian name. The flexibility of the cuneiform syllabary with its multiplicity of possible readings for individual signs and the fact that Sumerian has a large number of homophones make it unusually well suited to such an endeavor. A simple, straightforward example is an explanation of the quarter of the city of Babylon known as Eridu. The Sumerian name is written eri.du₁₀^{ki}, explained as *ālu tābi*, “the pleasant city,” with *ālu* translating the sign eri (URU) and *tābu* translating du₁₀. Most are more erudite and introduce modifications of the orthography for speculative purposes. The compilers have culled from the vast corpus of ancient lexical texts the most abstruse values. Some, in fact, go back to the esoteric UD.GAL.NUN Sumerian orthography of the middle of the third millennium. George refers (p. 73) to the “speculative etymology . . . unscientific in the extreme.” The first dozen lines of

Tablet I of Tintir have Greek transcriptions (that is, the pronunciation rendered in Greek letters) preserved for the Akkadian interpretations.

Chap. 2 is entitled “Babylon: Related Texts and Fragments.” One of these, edited as no. 5, is known as the E-sagil Commentary. The whole text is devoted to an explanation of the name of the great cult center of Marduk, Esagil. Various approximate ways of writing its name are manipulated to provide what was thought to be an appropriate meaning. An example is lines 13–14:

[é.s]a₁₂.an.aga.íl *bītu na-šu-(ú) a-ge-e šarru-ú-ti* (the Akkadian of which translates as “House which bears the royal crown”).

Line 14 then shows how this “translation” was reached:

[s]a₁₂ *šarru* sa₁₂ *a-gu-ú* aga *a-gu-ú* íl *na-šu-ú*, that is, sa = king, sa = crown, aga = crown, íl = bear.

Chap. 3 is “Babylon: Metrological Texts.” These texts, of which new duplicates are now added, have inspired considerable interest over the years, for they provide detailed measurements of the Esagil temple of Marduk and especially Marduk’s ziggurat, E-temen-anki. The commentary to this chapter (pp. 430–32) provides a detailed discussion of the question of whether the ziggurat had seven or eight stages.¹

Chap. 4 is devoted to texts concerning Nippur. One of these George calls “The Nippur Compendium.” This includes commentaries on the names and epithets of Nippur, extensive commentary on the name of Enlil’s temple, E-kur, names of other temples in Nippur, a list of divine mayors, commentaries on the four winds, days of the month, months and festivals, an extensive section which George calls “The Divine Directory of Nippur (for example, a list of 14 deities, summed up as “14 deities (living in) the temple of Gula.”

Another text edited in this chapter is called “The Nippur Temple List,” known from a previously unpublished fragment from Sippar. In this particular text, the temple names are sometimes broken down phonetically (Ninlil’s

¹ See now Hansjörg Schmid, *Der Tempelturm Etemenanki in Babylon* (Mainz, 1995).

temple E-ki-ur, for example, is given various spellings—such as é.ki.úr/ur₄/ú.ru/u.ru.

In his commentary to line 20' of the latter text, George refers to the temple E-bara-durgarra as "a well-known sanctuary of Ištar in Nippur." He does not say so, but it is in fact the great temple excavated by the Oriental Institute (and other institutions), to which the excavators generally referred as the Inanna Temple, rather than using its ancient name. It is quite likely that the temple of Gula, E-uru-sagga, is the one which has been partially excavated by recent Oriental Institute expeditions to Nippur. See McGuire Gibson, "Nippur, 1990: The Temple of Gula and a Glimpse of Things to Come," *Oriental Institute Annual Report 1989–1990*, pp. 17–26 and in a forthcoming volume of *Sumer*.

Chap. 5 is devoted to Assur. The principal text is generally known as the Götteradressbuch or Divine Directory. Since the Divine Directory has been edited elsewhere recently, George limits himself to a study of the sections which are of topographical interest. Again, the purpose of the text was the theological and cosmological glorification of Assur. On p. 460 George stresses the syncretism between Nippur and Assur (that is, many of the deities and many of the temple names of Nippur were taken over and adapted to Assur). The other text dealing with Assur is "A List of Shrines in E-šarra," E-šarra being the great temple of the god Aššur.

The remaining three chapters deal with other cities, such as Kish and Uruk, other topographical and explanatory fragments, and a chapter of miscellaneous texts, many of which are small fragments.

One of the great additional values of this volume is the copies published on the 58 plates. Included are copies of all texts which were accessible to George, including those published previously.

For a book which is so typographically complex, typographical errors seem very few indeed ("millennium" misspelled several times, a syllable omitted from "Nabopolassar" on p. 347, "of" for "off" on p. 429).

This is truly a remarkable book, one which will deservedly enhance George's international reputation and which is sure to be used exten-

sively for many years to come. It is a pity, however, that despite financial subventions, the cost is the equivalent of \$220.

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Sūkās IX: The Chalcolithic and Early Bronze Periods. By EVELYN OLDENBURG. Historisk-filosofiske Skrifter 14. Copenhagen: Munksgaard, 1991. Pp. 125 + 59 figs. + 4 pls. + 8 tables. D.Kr. 250.

The Danish Carlsberg Expedition to Phoenicia excavated the site of Tell Sukas on the Ghabla Plain along the coast of north Syria from 1958 to 1961 and again in 1963. While best known for its evidence showing the settlement of Greeks during the Iron Age, some earlier material was encountered at Tell Sukas. Evelyn Oldenburg has now published the Chalcolithic and Early Bronze material from a small deep sounding. The Neolithic material from the same sounding was previously published by P. J. Riis and H. Thrane, and the later material appears in other Sukas reports.

The sounding being reported on was a small one; more than 15 m deep, it measured some 4 by 4 m at the top and only 2.5 by 2.7 m at the bottom. The depth of deposit encountered was considerable; the Early Bronze layers were 8.7 m thick, the Chalcolithic 1.6 m, and the Neolithic 2.3 m. But the small horizontal extent of the sounding makes it difficult to say anything about the character of these early occupations. And as Oldenburg herself points out, the small number of sherds recovered from this sounding, 2497 in number, also makes it difficult to discuss the ceramics in detail. Given these limitations Oldenburg has produced a generally thorough and well-organized report.

The Chalcolithic material encompassed Layers (apparently loci or features) 59A to 53 and has been divided into two overall phases deemed Periods M 2 and M 1. The Early Bronze Age material comprised Layers 52 to 20 and was divided into Periods L 4 through 1. Oldenburg dates Phases M 2 and 1 to the "Late Chalcolithic,"

PHASE	SUKAS IX REF.	SAMPLE NO.	RADIOCARBON REF.	CALIBRATED DATE
Period M 2				
Layer 58	Sukas IX, p. 9, n. 7	K-936	Radiocarbon 15 (1973): 108	4790 cal B.C. ¹
Period L 4				
Layer 48	Sukas IX, p. 25, n. 232	K-713	Radiocarbon 15 (1973): 108	3080 cal B.C.
Period L 2				
Layer 39	Sukas IX, p. 34, n. 360	K-1124	Radiocarbon 15 (1973): 108	2890 cal B.C.
	Sukas IX, p. 34, n. 360	K-1128	Radiocarbon 15 (1973): 108	2770 cal B.C.
Layer 38	Sukas IX, p. 33, n. 358	K-1126	Radiocarbon 15 (1973): 108	2890 cal B.C.
	Sukas IX, p. 33, n. 358	K-1127	Radiocarbon 15 (1973): 108	2890 cal B.C.
Layer 35	Sukas IX, p. 34, n. 362	K-1125	Radiocarbon 15 (1973): 108	2910 cal B.C.
Layer 33	Sukas IX, p. 34, n. 363	K-1123	Radiocarbon 15 (1973): 108	2890 cal B.C.
Period L 1				
Layer 27	Sukas IX, p. 40, n. 441	K-714	Radiocarbon 15 (1973): 109	2800 cal B.C.
Iron Age				
Layer 7		K-937	Radiocarbon 15 (1973): 109	1350 cal B.C.

A radiocarbon date derived from the excavations conducted by the Danish team at the nearby site of Tall Daruk.

Tall Daruk	K-935	Radiocarbon 15 (1973): 109	2810 cal B.C.
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Periods L 4 and 3 to the "EB I-II," Period L 2 to the EB III, and Period L 1 to the EB IV A. The dating of these periods is based on ceramic parallels and on slender radiocarbon evidence. The dating of the earlier phases is problematic, reflecting the general lack of certainty throughout the northern Levant regarding the transition from the "Chalcolithic" to the "Early Bronze Age" and the internal periodization of the latter. Several installations and fragments of large walls recovered, especially in the later EB levels. These give only the slightest indications of what must have been extremely significant occupations.

One wishes that the radiocarbon dates had been presented together as a table rather than being spread through the text. Originally published in H. Tauber, "Copenhagen Radiocarbon Dates X" (*Radiocarbon* 15 [1973]: 86-112), the Sukas dates are presented by Oldenburg with their original 1970s calibrations rather than with those

based on the 1986 or 1993 standards. The dates have therefore been grouped by phase, layer, and sample numbers, and *Sukas IX* and *Radiocarbon* 15 page references and recalibrated below using the CALIB 3.0 program (see M. Stuiver and P. J. Reimer, "Extended 14C Data Base and Revised CALIB 3.0 14C Age Calibration Program," *Radiocarbon* 35 [1993]:215-30). The calibrated B.C. dates were calculated using the intercepts method and are presented here without standard deviations.

It should be noted that most of the samples were charcoal from probably long-lived olive and oak trees. The larger implications of these new calibrations go beyond the scope of this review, but it seems clear that significant upward adjustments must be made in third and fourth millennia

¹ The sample number given by Oldenburg (K-393) does not agree with that published in *Radiocarbon* 15.

chronologies (see generally G. M. Schwartz and H. Weiss, "Syria, ca. 10,000–2000 B.C.," in R. W. Ehrich, ed., *Chronologies in Old World Archaeology*, 3d ed. [Chicago, 1992], pp. 221–43).

The ceramic parallels Oldenburg adduces are largely from the ^cAmuq, Hama, and Ras Shamra. Most of the best Early Bronze Age parallels appear to be with Ras Shamra Niveau III A1, which also would support dating the Sukas levels towards the beginning of the third millennium rather than at the end as Oldenburg suggests (see now H. de Contenson, *Préhistoire de Ras Shamra* [Paris, 1992]). Oddly, no references are made to the excavations at Tabbat al-Hammam and Tell Simiriyān (R. J. Braidwood, "Report on Two Sondages on the Coast of Syria, South of Tartous," *Syria* 21 [1940]: 183–226), Tell Nebi Mend (V. T. Matthias and P. J. Parr, "The Early Phases at Tell Nebi Mend: A Preliminary Account," *Levant* 21 [1989]: 13–32) or the surveyed sites of Rousset-al-Amir and Qal^cat Siriani (J.-C. Courtois, "Deux villes du royaume d'Ugarit dans la vallée du Nahr-el-Kébir en Syrie du Nord," *Syria* 40 [1963]: 261–72). Oldenburg does refer repeatedly to the 1934 excavations at Tell Sukas and Qal^cat er-Rus conducted by Forrer and partially published by A. M. Ehrich in *Early Pottery from the Jebel Region* (Philadelphia, 1939). A significant contrast is that while 'Khirbet Kerak' or 'Red Black Burnished Wares' were apparently found in the 1934 excavation, none were recovered by the Danish project. Reexamination and republishing of Ehrich's material would be of great help in coordinating the two assemblages.

The tantalizing material presented in the Sukas report again shows how important coastal Syria was in the fourth and third millennia B.C. Besides Ras Shamra and Ras Ibn Hani, relatively little archaeological work has been carried out in this area in recent years, with the exceptions of Tell Kazel (see *Berytus* 38 [1990]) and Tell ^cArqa (see *Syria* 55 [1979]: 1–153; *Berytus* 39 [1991]: 21–38). With third-millennium Syria now a focus of renewed interest and excavation, it may be hoped that a project will be launched at a coastal site to address development of the maritime-based social complexity peculiar to the northern Levant.

The book itself is attractive and well produced with few typographic errors. It represents a small

but welcome addition to our understanding of the late prehistoric and early historic periods of the northern Levant.

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The Tomb of Iurudef: A Memphite Official in the Reign of Ramesses II. By MAARTEN J. RAVEN ET AL. Leiden: The National Museum of Antiquities; London: The Egypt Exploration Society, 1991. Pp. xvii + 82 + 55 pls. \$60.

This book presents the results of the 1982–86 joint Anglo-Dutch excavation of the Sakkara tomb of Iurudef, a scribe of the royal treasury during the reign of Ramesses II. The tomb was found to contain the Nineteenth Dynasty burials of Iurudef and several members of his family and also a cache of approximately seventy burials of the early Third Intermediate Period.

The Third Intermediate Period material in particular is of great interest, for the variety of artifacts and the varying styles of interment supply very valuable information about the range of mortuary practices of the nonelite in the Third Intermediate Period. Among the burials were twenty-seven anthropoid coffins, which for lack of a better term, were "crudely" executed and decorated. Other adult burials of the cache were deposited in palm rib mats. As the author suggests, the palm rib mats were used exclusively for adult burials because the palm ribs are the approximate length of an adult. Children's bodies were deposited in roughly made rectangular or trapezoidal coffins or, in the case of younger children, in containers made of a palm rib frame covered with papyrus rind. The black and white photos and detailed construction drawings of the wood coffins are an excellent record of this little-documented material.

The material from the cache has important implications for dating such crudely made coffins which traditionally have been assigned a "late" date on account of their perceived decadence and lack of artistic finesse. The Sakkara coffins and grave goods have strong parallels to burial groups from Middle Egypt at Lahun, Sedment, el-Hiba, and Matmar. Not only are the general decoration and construction of the coffins similar, but both

groups evidence the use of pseudo-hieroglyphs. The Sakkara group has a secure date of the early Third Intermediate Period (pp. 10, 23, 35), suggesting that the materials from Middle Egypt may indeed, as suggested years ago by Petrie, be considerably earlier than has been assumed by others. So too the Sakkara material confirms that the use of "pseudo-hieroglyphs" is not characteristic of a "late" date but that this style of corrupt and perhaps symbolic writing was used at least as early as the Third Intermediate Period.

The material from the tomb does much to illuminate the burial practices of the nonelite. Although climate and insects reduced the bodies to skeletons, there was no evidence (such as canopic materials, Sons of Horus figurines, or damage to the ethmoid sinus of the skulls), to suggest any sort of artificial mummification. So too, the slumped posture of burial no. 27 suggests that the body was interred only a few days after death, suggesting a far simpler mortuary ritual than may have been the norm for the elite.

John Taylor's contribution regarding the decoration of coffins (pp. 17–23) is a good summary of iconography and dating coffins on the basis of their decoration.

Roxie Walker had the difficult task of analyzing the skeletal remains from the tomb. Her introductory remarks about human osteology and palaeopathology are helpful and the amount of information that can be gleaned from bones alone is amazing. Considering her precision in the examination of the skeletal remains, however, it is puzzling that she is so imprecise in other regards. For example, on p. 58, she refers to factors which "may make a person of lower social class appear older than someone of the same sex and age but of a higher social class." On table 2 (pp. 72–75), the term "social class" seems to refer only to age groupings rather than any social standing. One must question the usefulness of the discussion regarding genetic subgroups (race) which is based upon studies of North American populations, wherein people are divided into three groups: white, American Black, and American Indian. Using this previous study, Walker points out the affinities of ancient Egyptians to these three groups (table 2 b–d), but since Walker does not include a discussion of the characteristics of the genetic types, the table seems pointless. Further, the terms used in the study are imprecise ("black"

and "white" as racial types), and they are loaded with cultural implications which the author may not have intended, in spite of a lengthy disclaimer. The discussion seems more like an exercise in statistical analysis than a useful addition to the excavation report.

The plan and section of the tomb (pl. 5) is very unclear and even confusing in the inconsistencies of its conventions. Section drawings should either: (1) illustrate only those elements which are cut by the section line or (2) include all relevant information that falls beyond the section cut. The section has indications of door jambs which are not cut by the section lines shown on the plan; yet the draftsman does not follow this convention and indicate, perhaps in dotted line, the location of chamber F. The line separating the shaft from chamber E is, judging from the description of the architecture, unnecessary. So too, the text does not indicate what the bulge over chamber E may be.¹

This is generally an excellent excavation report. The bulk of the text is clear and concise, and the material adds significantly to our knowledge of mortuary practices of the nonelite in the Third Intermediate period.

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¹ I profited from a discussion with John Sanders, Head of the Oriental Institute Computer Laboratory, regarding the plan and section of the tomb.

Pharaohs and Pyramids: A Guide through Old Kingdom Egypt. By GEORGE HART. London: The Herbert Press, 1991. Pp. 240. £17.95.

As his reason for writing *Pharaohs and Pyramids*, George Hart cites "the need for a popularly accessible interpretation of the Pyramid Era." This need is not so great as he implies—both Cyril Aldred's *Egypt to the End of the Old Kingdom* and Jaromir Malek's *In the Shadow of the Pyramids* offer the general reader well written and nicely illustrated introductions to the period—but Hart's book differs from earlier works in serving as a guidebook to Old Kingdom sites as well as a general introduction. This gives his book a monumental focus and makes it especially appealing to tourists or prospective tourists.

The organization of the book is chronological, covering the period from the Badarian through the end of the Sixth Dynasty. (The description of the Sixth Dynasty tombs of Qar and Idu directly after the reign of Khufu is an exception that might have been more clearly marked.) In general, the middle Fifth Dynasty is given rather short shrift, as are sites outside the Memphite region. (A detailed guide to the provincial tombs at Qubbet el-Hawa would have been useful, for example, since so many tourists overlook them.) More surprisingly, Hart omits any reference to Old Kingdom works of wisdom literature, despite detailed descriptions of the tombs of Kagemni and Ptahhotep's son Akhetotep.

The presentation of the material is generally clear, although the transition from narrative to the "you" or "we" of a guidebook is often abrupt and the English is sometimes awkward. Weird lapses in diction, such as the "extrusion" of foreign overlords (p. 40) and the "theoretic restitution" of a façade (p. 66), suggest a malfunctioning computer spelling-checker. The book has no notes and is supported only by a bibliography of "further reading." This includes technical titles, some in French and German (often badly misspelled, for example "... tombeaux de l'ancien empire"), but obviously related works, such as Malek's *In the Shadow of the Pyramids*, Barry Kemp's *Ancient Egypt: Anatomy of a Civilization*, and Kemp's chapter from *Ancient Egypt: A Social History*, are omitted.

The photographs are well chosen and include several rarely published sites and objects. When they are good, they are very, very good, but the quality is uneven, and, surprisingly, many of the less successful are the views most commonly reproduced (for example, the entrance to the Djoser Complex). While museum information is usually given, six pieces from the Metropolitan Museum collection, including the Lisht blocks are captioned only with the odd and insufficient phrase "(Now in USA)."

As for the content of the book, it contains only a few outright errors: the stela of Ra-neb was found at Memphis, not at his nonexistent cenotaph at Abydos (p. 44); women of the royal family were often shown wearing the priestly leopard skin, so Meresankh is not "astoundingly garbed" in it (p. 112); the lower western part of Khafre's pyramid was carved out of the living

rock, not built on a leveled surface (p. 127); and the pregnant woman in the tomb of Ankhmaahor (if she is pregnant) is depicted in the (unmentioned) funeral scenes, not the "surgical" scenes (p. 220).

The book's most successful parts are its vivid descriptions of Old Kingdom tomb decoration. Hart covers the tombs of Meresankh, Qar, and Idu at Giza in chap. 7, and the tombs of Nefer and Kahai, Niankhkhnum and Khnumhotep, Ptahhotep and Akhetotep, Ty, Mereuka, Kagemni, and Ankhmaahor at Saqqara in chap. 10. The scenes are presented wall by wall, with full discussions of the most interesting bits. Some of these details are illustrated in the plates and figures, and Hart gives clear references to these in the text. He has also provided family trees for some of the tomb owners and numbered plans of each tomb that make it easy to follow his descriptions. (The locations of these tombs are not, unfortunately, marked on the maps of Giza and Saqqara.)

As a guidebook for on-site use, however, the book's organization, its size and length, and the incompleteness of its practical information would make it difficult to use. Some of its recommendations are also questionable. For example, Hierakonpolis and el-Kab are said to be "accessible by road on a day's excursion from Luxor," but this excursion is neither easy nor particularly rewarding. Conversely, Hart does not suggest a visit to Abu Roash, which is no more difficult to reach and much more interesting. The monuments of Meydum, Abu Sir, and the Sixth Dynasty pyramids at South Saqqara are described, as are those of Dahshur, in the hope that they will eventually be equally accessible; but the impressive pyramid of Djedkare-Izezi at South Saqqara (an easy walk from the later pyramids) is not even mentioned. The author's somewhat mystical reactions to some of these sites will intrigue some readers and disturb others.

The narrative sections of the book offer a readable but idiosyncratic account of the development of Old Kingdom monuments. Following Emery, Hart locates the true burials of the First Dynasty kings at Saqqara, regards the tombs at Abydos as cenotaphs, and assumes that the human arm found in Djer's tomb wearing bracelets bearing his name was that of a "lady of high

rank," rather than of Djer himself. He offers little discussion of the considerable evidence that the Saqqara tombs belong to officials. Hart also reproduces and extends, with little hesitation ("A tentative reconstruction can be made"), Reisner's melodramatic speculations about internecine feuding in the family of Khufu, full of assassinations, forced marriages, usurpations, and revenge. Prince Kawab is said to have been assassinated by a "hit-squad," and events for decades afterwards are attributed to complications arising out of Radjedef's alleged usurpation. A sample of this will suffice:

Why did Shepseskaf construct at South Saqqara a modest, atypical funerary complex so far from his predecessor's pyramids at Giza? There has already been a hint of pressure from the ambitious scions of Radjedef's line, perhaps already consolidating resources from the state treasury. One has the feeling Shepseskaf must have known that the impetus behind the raising of the colossal pyramids of his ancestors was now a spent force. It must also have been evident that no son of his would ever wield the royal scepter, but would in fact be destined to live as a nonentity. (p. 144)

There is little evidence for any of this, but it makes a good story. (Reisner wrote a musical comedy on the theme, which is surely the most suitable place for such imaginative drama.)

Hart also favors a number of other unorthodox interpretations. During the late Predynastic period, for example, he argues for a Mesopotamian conquest. He believes that the change in angle of the Bent Pyramid was intentional and meant to represent the duality of Upper and Lower Egypt, and he sees this same duality represented in the two colors of the granite and limestone casing of Menkaure's pyramid. This is an interesting idea, but such a "sophisticated architectural concept" would hardly make it more likely that Snefru was buried in the Bent Pyramid, as Hart suggests. In describing the Valley Temple of Khafre, Hart follows Vikentiev's highly theoretical interpretations of the meanings of the ritual spaces, but his related interpretations of the six shrines and five columns of the Snefru "Valley Temple" as representing the three seasons (doubled) and the five epagomenal days is not convincing. (A portico in front of six

shrines can *only* have five columns, if the doorways are not to be blocked.) That the six store-rooms in Menkaure's pyramid contained the crowns of Upper and Lower Egypt and "the four cult symbols of his embalmed viscera" is surely only speculation and not "without a doubt." Equally questionable is his attempt to show Meretites (wife of Kahai and mother of Nefer in their Saqqara tomb) as an overbearing wife. "Dare one deduce female persuasiveness or outright dominance from [her] inescapable presence . . . ?" the author asks, and then refers to her "insistent participation in . . . outdoor activities," calling her "forceful" and "irrepressible"—all because she is represented on her husband's false door while he is absent from hers (the standard pattern), and because she wears sandals. Hart seems to feel that Meretites ought to have been kept barefoot . . . and perhaps pregnant?

Such hypothetical descriptions of the personalities of the ancient Egyptians and the cosmological meaning of their monuments make the book both vivid and readable. They also make it less suitable for students and difficult to recommend unqualifiedly even to the amateurs for whom it is intended. This difficulty is frustrating, since the book does contain up-to-date information, engagingly presented. Despite its flaws, however, *Pharaohs and Pyramids* will doubtless be read and enjoyed by many tourists and armchair travelers with a special interest in the Old Kingdom.

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Excavations between Abu Simbel and the Sudan Frontier, Part 9: Nouabadian X-Group Remains from Royal Complexes in Cemeteries Q and 219 and from Private Cemeteries Q, R, V, W, B, J, and M at Qustul and Ballana. By BRUCE BEYER WILLIAMS. Oriental Institute Nubian Expedition, vol. 9. Chicago: The Oriental Institute, 1991. Pp. xxxix + 501 + 195 figs. + 83 pls. + 54 tables. \$60.

As is stated in the preface, this is the last of the publications to deal with the pre-Christian remains excavated by the Oriental Institute Nu-

bian Expedition between Abu Simbel and the Sudanese frontier. The hope is offered that the remains of the Christian period may be published in a future work. It is a worthy successor to the other volumes, and Williams is to be congratulated on bringing this extremely important data to publication.

As with the other OINE volumes, the format and presentation is lavish, not to say extravagant, hence the size of the volume and its not inconsiderable cost.

The book begins with a short résumé of the work on the X-Group remains at Qustul and Ballana and highlights a number of problems facing the student of the archaeology of the X-Group. This is followed by a discussion of the chronology of the X-Group, one of the major problems, concerning which much has been written since Reisner first identified the culture and dated it to A.D. 200–600.

The excavations of the royal *tumuli* by Emery and Kirwan provided the bulk of the material which has allowed the debate to continue. The most detailed chronological framework is the work of László Török and is most recently set out by him in *Late Antique Nubia*. Török based much of his dating on the development of the tomb structures and on the fine imported objects found in the royal tombs. The approximate date of manufacture of these, if not the date of their deposition within the tombs, can often be closely defined. Williams arrived at the chronological periods used in this book by looking to “the sub-structures of the great tombs, changes in pottery typology and the development of the Qustul Cemetery.” His sequence basically agrees with that of Török, but he eschews Török’s close dating.

Williams summarizes the different structures which were located in the Royal Complexes, the recognition of which was one of the most important discoveries of OINE’s work on the site. Looking for the antecedents for the burial customs employed, he examines the evidence for *tumuli* graves in the central Sudan, at Ushara, Tanqasi, Meroe, and Hobagi. This section of the report highlights one of the misconceptions which permeates the whole work, the notion that Meroitic and X-Group Nubia can be contrasted with the Sudan. That Nubia extends into Sudan

seems to have escaped the author. The linear derivation of the Qustul and Ballana tomb types from the examples he cites in Central Sudan seems unlikely. Influences could have moved both ways, have a common origin in the recent late Meroitic past, or have been a contemporary development rooted in ancient Nubian traditions. In the absence of close dating for the examples in Upper Nubia, such a linear development is extremely difficult to prove.

The description of the pottery types continues the distinction between the pottery of Sudan and Nubia. As with the tomb types, the influence of the pottery of the “Tanqasi culture” on some of the ceramic types at Qustul and Ballana seems tenuous. What is noteworthy are the different pottery types to be found to the north and to the south of the Third Cataract zone. Some of the most distinctive of the post-Meroitic forms in Upper Nubia are not seen in the north at all, notably the long necked handmade beer jars. These are hardly the prototypes of the bottle-jars which are, according to Williams, “derived from post-Meroitic Sudan” (p. 158) and “derived from Tanqasi prototypes at Ushara and Meroe” (p. 11). The section rather grandly entitled “Pottery and the Economic Life of Late Nubia” (pp. 50–51) can hardly do justice to the subject in its 14 lines of text. The pottery section is concluded with a type series of X-Group pottery, i.e., pottery of the Nobadian X-Group.

A general discussion of the objects follows. That of the military equipment and especially those items related to archery are particularly interesting as is that of the saddlery. Table 16 provides a concordance of archery equipment and related weapons, but its value is reduced, as all weapon points are entered as arrowheads irrespective of what they actually are, and some tombs with only a single item are not included in the table at all. The spearhead, no. 21, from Q62 is placed in the column headed “Iron.”

The concluding section of the introduction covers a lot of ground in its six sides of text and is, in some cases, amazingly brief. Trade, for instance, is dismissed in nine lines of text. One may dispute the statement of fact that “there was a vast expansion [of settlement?] (my brackets) near Meroe . . . after A.D. 100” (p. 160). That the “empire comprised three

regions centered on Napata, Meroe and lower Nubia" (p. 160) partly reflects the thrust of archaeological research. Further work will, and already to some extent is, showing a much more even spread of settlement.

Appendix A allows the reader to correlate a particular tomb with its location on the site or, perhaps rather surprisingly, with which volume in the OINE series it is published in.

The real meat in the book is contained in Appendix B: Register of Finds, where the material is ordered by cemetery area, and this is followed by an index of the *loci* within the register to allow ease of location of the relevant data. It is not simply concerned with the finds, but also with the structural data and is frequently accompanied by plans and sections. These are not always easy to understand as the plans and sections do not, in every case, correlate e.g., figs. 102 and 146. After a listing of each "monument" with its finds, grouped by the area of the cemetery in which they lie, there appears another list of the stone objects and fittings, basically the same data as before, and one wonders whether a duplicate list is really necessary. One may note object D on fig. 159 "Truncated Cone of Pink Stone." Surely this is an archer's loose. There is no discussion of this piece in the Register of Finds, and the tomb from which it came is published in OINE, vol. 8. The animal pit Q20 shows a very interesting substantial wall, revetment, or foundation which is dismissed as a "jumbled mass of brickbats and stone" (p. 231). Is it a feature predating the animal pit?

Throughout the work, the quality of the drawings is high, although those of the metalwork are rather "flat."

Mistakes in the text are few. I noted only one error in text layout on p. 207. On pls. 4 and 5 some of the numbers assigned to *tumuli* differ from those assigned to the same *tumuli* on pl. 2. On p. 181 the reader is referred to pl. 5 rather than to pl. 7 for the Qu.31 chapels QB; n. 20 directs the reader to pp. 72–73. P. 72 is a blank page and p. 73 has no reference to the objects under discussion. The drawing of the archer's loose already mentioned (fig. 159D) is in a different style to the other drawings of objects of this type, and it is clearly designed to be reduced to 50 percent linear.

I found the book difficult to dip into, and a number of the plans in particular, in the absence of explanatory captions, need to be puzzled over for some time before they can be understood. Figs. 1 and 2 are good examples, where the presence of two plans, one caption, two scales, and two north points for each figure was confusing. No distinction is made between the blow-up plans of the tomb chambers and the topographical plan within which they are incorporated. Confusion also arises from the letter codes used throughout the book; for example, all the QB chapels are in area QD and all the QC chapels are in area QE, a legacy presumably of the excavation recording system.

Writing up someone else's excavations is always unsatisfactory whatever the quality of the recording. That Williams has been able to produce such a detailed and well-illustrated report is a credit both to the quality of the initial excavation and to his perspicacity in handling the massive amount of data that this excavation clearly produced. The cemeteries at Qustul and Ballana are, along with the material still being recovered from Qasr Ibrim, and perhaps with that yet to be published from Gebel Adda, of fundamental importance to our understanding of the X-Group. This book, therefore, will be of inestimable value to scholars of that period.

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A History of Palestine, 634–1099. By MOSHE GIL. Translated by ETHEL BROIDO. Cambridge: Cambridge University Press, 1992. Pp. xxvi + 968. \$125.

In a region with as long a history of upheaval and change as it does, the events of the latter half of the first millennium C.E. in Palestine stand out as much for their sustained warfare and conflict as for their lasting impact on the social landscape of this region. Commencing with the Persian invasion of 614 and the arrival of Islamic rule in 634–36, and culminating in the violence of the Crusades, the period saw the rise and fall of a succession of rival dynasties and empires, each intent on maintaining control

of the important landbridge that is Palestine. Yet these political events should not overshadow the important social and economic developments which transpired during the period as well, particularly those involved with the introduction of Islam. Many of these changes permanently transformed the structure of local institutions and are still discernible today. It is the history of this transformative and pivotal period then which Moshe Gil, in this bold and ambitious study, has set out to document.

The present volume is actually a revision and translation of volume one of *Palestine during the First Muslim Period*, a three-volume work originally published by the author in Hebrew in 1983. To write his history, Gil has utilized an impressive array of primary material, culled for the most part from sources left by the three primary communities living in Palestine during this period, namely, the Jews, Muslims, and Christians. His single most important resource, however, was the Cairo Geniza collection. As a student of the late S. D. Goitein, Gil has worked extensively with hundreds of documents from this remarkable collection and draws heavily from them in his reconstruction of the socioeconomic life in Palestine during this period. For those proficient in both Hebrew and Arabic, Gil has compiled and reproduced some 643 of these documents in their Judaeo-Arabic original, with Hebrew translation and commentary, in volumes two and three of the Hebrew edition, with a supplement in *Te'uda* 7 (1991). In the present volume they are referenced in the footnotes in boldface type according to their index number as they appear in the Hebrew edition.

Gil begins his survey with an examination of the events leading up to the Islamic conquest. In a brief introduction, he rightly describes it as a drawn out process taking years to complete, rather than a single expeditious event. When he turns to examine the underlying factors which enabled the Muslim conquerors to succeed, however, Gil unfortunately invokes traditional value-laden images of hostile "nomadic tribes," "forcefully spearheading" into a world of "cultivated lands" and "culture" left weak and vulnerable by the "decline" and "internal disintegration" of an empire fraught with "anarchy, poverty and plagues." While internal problems

within the Byzantine empire may indeed have contributed to the success of the conquest, the stereotyping of both sides of the conflict do little to enhance our understanding of the complex factors which must have affected the transition from Byzantine to Islamic rule in Palestine.

In chap. 1, where he focuses specifically on the events of the conquest itself, Gil continues to expound on the factors which he feels influenced its outcome. For him ideology was the single driving force behind the conquest, and he is disparaging of those who see a "... socio-economic motive behind every political and military act" (p. 12). Nevertheless, Gil credits the harshness of the desert climate with driving the bedouin north in search of "... opportunities to plunder and pillage the subdued populations ..." for the sake of "material gain" and "worldly goods" in "... an effort to extricate themselves from the hardship of desert life" (p. 14). He concludes that a "balanced approach" incorporating these religious and economic motives with the weakened condition of Byzantium is the most valid explanation for the success of the Muslim conquerors.

After discussing the "profound contrast" between the "permanent" urban inhabitants and "tribal" nomadic populations of the region, Gil begins his account of the conquest with the first incursions at Dhāt Aṭlāḥ and Muṭa. Relying heavily on the narrative accounts, or chronicles, of al-Ṭabarī, al-Balādhurī, and other early Arab historians, he follows a fairly traditional reconstruction of the sequence of events which resulted in the successful conquest of Byzantine-held Palestine. Almost entirely lacking, however, is any critical evaluation of the historical reliability of his sources. Although attempts are made to reconcile contradictions between the various accounts, for example, the conflicting views of when the conquests actually began, Gil nevertheless fails to address, or even mention, the serious doubts which have been raised (beginning with Wellhausen and Goldziher, and continuing more recently with Schacht, Wansbrough, Cook, and Crone) about the historical veracity of these narrative traditions. To be fair, in his preface to the book, Gil does state that he did not intend for it to serve as a "bibliographic guide" to the rich research literature on the period (p. xiv).

Addressing these criticisms, however, is clearly crucial to any attempt to reconstruct the events of the conquest from the narrative accounts and should have received at least some mention, even if only in passing.

In describing the impact of the conquest on the local population, Gil once again reverts to traditional interpretations of widespread destruction and devastation. He states that while "... it is impossible to learn the real truth ... one can assume that the local population suffered immensely during the course of the war and it is very likely that many villages were destroyed and uprooted in the frontier regions ..." (p. 61). This statement is made in spite of the fact that he acknowledges that support for this interpretation comes almost exclusively from conflicting, and somewhat biased, accounts of a number of clashes between Muslim forces and local resident populations. Gil also claims that evidence of destruction found at synagogues and churches of this period should be attributed to the violence of the conquest. It is not readily apparent, however, what evidence he is referring to, especially as recent and ongoing archaeological excavations of synagogues (e.g., Hammath Tiberias and Qasrin), churches (e.g., Madaba, Ma'in, Quweismeh, Rihab, and Umm al-Rasas), and urban communities (e.g., Beth Shean/Beisan (Scythopolis), Caesarea, Pella, and Tiberias/Tabariyah, to name only a few) throughout Palestine and Transjordan are producing incontrovertible evidence of cultural continuity and continuing prosperity during the transition from Byzantine to Islamic rule.

In chap. 2, Gil turns to the period of Umayyad domination, when Islam began to "strike roots" in Palestine. After a somewhat cursory treatment of the main political events of the seventh and eighth centuries, he devotes the remainder of the chapter to a discussion of how this process was accomplished, emphasizing the importance that the region acquired during the Umayyad Caliphate. Jerusalem was elevated to the status of a holy city, sanctified in the eyes of Muslims, and an extensive building program embarked upon.

Gil continues his discourse on this "Islamization" process in the following two chapters, focusing on the relationship between Muslims and non-Muslims, or "between the rulers and

the ruled," in chap. 3 and the economy in chap. 4. For documentation, he relies primarily on sources dating from as late as the eleventh century, arguing that, "due to the conservative character of the social and administrative pattern of those times, the facts and findings of the eleventh century can shed light on the entire period, beginning with the conquest" (p. 139). This rationale enables him to draw heavily from the Cairo Geniza documents, and to conclude that the social and economic conditions depicted in them were reflective of the whole period in question. While he may or may not be right, Gil nevertheless once again fails to be discriminating in his use of primary sources. Thus, for example, complaints in private correspondence about heavy taxes are taken as indicative of a general policy of oppressive taxation by the Muslim authorities (pp. 149-151), in spite of the anecdotal nature of this evidence.

Chap. 5 marks a return to political and military history. The narrative picks up with the beginning of Abbasid rule and continues, through chap. 6, to the latter part of the eleventh century. For Gil, the events of the Abbasid revolution introduced drastic political and social changes to the region. With the shift of the ruling center from Damascus to Baghdad, the political importance of Palestine was greatly diminished, and the region became something of a backwater, entering a period of decline. Palestine returned to center stage, however, with the ascendance of the Tulunids to power toward the end of the ninth century, and for the next two centuries the region became a hotly contested battleground as rival dynasties vied for control of the important landbridge.

Gil interrupts his running historical narrative for a second time in chaps. 7 through 9, embarking on a lengthy study of the region's indigenous non-Muslim communities—the Christians (chap. 7), Jews (chap. 8), Karaites, and Samaritans (chap. 9). In chap. 8, which is almost a fourth of the entire book, Gil discusses the Jewish population and its leadership. Here he is at his best. Utilizing the Cairo Geniza documents extensively, he argues forcefully, albeit somewhat polemically (as for example in sec. 728, on p. 490), that the Jewish community conceived of itself as a "nation" and that its identity was

preserved by strong communal organization and the central role of the Palestinian Yeshiva, with the Gaon at its head. The chapter is an impressive synthesis of the social and religious history of a vibrant community adapting well to the challenges created by the turbulence of the period.

Gil brings his survey to a close in chap. 10 with a brief summary of the circumstances which facilitated the initial success of the Crusades. Schisms and internal strife are seen as the primary factors which opened the way for a triumphant conquest, bringing to a close a cycle which had begun almost 500 years earlier with the Muslim invasion of Palestine. The volume is rounded out with a useful chronology of principal events covered in the book, a helpful indexed bibliography, and a general reference index.

Overall, Gil has produced an impressive piece of scholarship. He has amassed a wealth of historical detail, particularly concerning the social and economic life of the various indigenous communities. At the same time, however, the level of critical historical analysis is disappointing, and the tendency to use value-laden stereotypes troubling. Nevertheless, *A History of Palestine, 634–1099* surely will, and indeed should, become a basic reference work on the period. The English translation is clear, and the editorial work reflects the high standards of its publisher.

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The Distant Shrine: The Islamic Centuries in Jerusalem. By F. E. PETERS. New York: AMS Press, 1993. Pp. 275.

F. E. Peters has been studying and writing about the Near East for a long time, and his contributions have been important, inspirational, and a pleasure to read. His writing, and especially his *Jerusalem: The Holy City in the Eyes of Chroniclers, Visitors, Pilgrims and Prophets from the Days of Abraham to the Beginnings of Modern Times* (Princeton, 1985), is filled with a kind of majesty, and the tone of his work, combined with the details of his sources, sometimes reaches a crescendo, like the experience of listening to a great symphony. His subject,

Jerusalem, certainly commands such treatment. Inevitably, the present work must be compared to his *Jerusalem*, with the unfortunate result that *The Distant Shrine* is a book that has an important purpose but which is disappointing in its present form.

The author has rightly singled out an important lacuna in Near Eastern Studies, namely an accessible work on Islamic Jerusalem from A.D. 635 to the present, a work synthesizing recent scholarship on the city in broadly analytical terms. Until now, we basically had the outdated Guy Le Strange work *Jerusalem under the Moslems* (Jerusalem, n.d.) and the useful recent collection of essays *Jerusalem in History*, edited by K. J. Asali (New York, 1990).

Essentially, *The Distant Shrine* is a distillation of Peters's *Jerusalem* and cannot be used for research purposes without it because the citations made in the former work can be found only in the latter one, as noted in the appendix (p. 247). Peters was quite right to focus his argument about Islamic Jerusalem in a separate volume, since it is important to view Jerusalem from a Muslim perspective on its own terms. To a large extent, the book achieves its purpose. Yet it is flawed because the reader cannot follow the sources used, and reading a book such as this without footnotes was for me like walking a tightrope without a net. It is true that there is a useful bibliographical essay at the end of the book, where in a general way some attributions are made, but it is difficult in a format like this to trace the genesis of Peters's assertions. In another way, this book compares unfavorably to its predecessor. Technically, *Jerusalem* is a handsome volume, using different fonts to good end, differentiating quotations from the narrative, while *The Distant Shrine* suffers from the annoying double spacing of paragraphs, and the use of only a single font. The effect of this is to make Peters's majestic prose sail choppy waters, making the text seem disjointed even when the writing is not.

Despite these criticisms, *The Distant Shrine* is an important introduction to the growing literature on Islamic Jerusalem, especially for that audience which will not delve through *Jerusalem*. Peters has synthesized the Islamic centuries in Jerusalem in a sensible and thought-provoking

way. Using those same reports of chroniclers, visitors, and pilgrims, and emphasizing the Muslim perspective, Peters shows the interrelationship of the physical city—its architecture and public spaces—with the political and religious issues which concerned its inhabitants and their guests. The book consists of twelve chapters, beginning with a general chapter on the religious significance of the city to Muslims, going back to Abraham, as well as a topographical survey of the physical city. The book is to be praised for containing maps, but this chapter, which draws upon the famous Madaba Map, would have been enhanced by the inclusion of a reproduction or drawing of it for the reader's reference. The second chapter, on Christian Jerusalem, weakens the impact of the first because its focus on the Christian city makes it appear as though the author had seriously neglected the Jerusalem of David, Solomon, and Herod. Only by turning back to the larger work, *Jerusalem*, can that impression be erased. Peters could have avoided this problem simply by stating at the onset that the subjects of Israelite, Roman, and Byzantine Jerusalem were covered extensively in his previous work, and concentrating fully on the Muslim period, using only that material which would convey the significance of Jerusalem to the early Muslim community. These subjects are essential for setting the context of the third chapter on the *Haram al-Sharif*, the Noble Sanctuary, the focal point of Islamic Jerusalem. It is at this point that we get into the heart of the book and where it is most useful. Unfortunately, it is also in this chapter that we see some editing problems (pp. 63–65). The fourth chapter treats the period of Muslim rule up to the Crusades, and the fifth, sixth, and seventh deal with the Crusades, again making extensive use of Muslim commentaries. It is chapter eight that I found to be the most important and interesting; in it Peters does an excellent job of showing how Sunni Islam was retooled by the Ayyubids in the face of the Fatimid Ismaʿili challenge. This is a powerful argu-

ment, one that explains much about Islamic Jerusalem and Sunni Islam after the Crusades, placing the issues in terms of the intellectual, political and religious ferment of the Muslim world, rather than focusing merely upon the question of East versus West, Islam vs. Christianity. This perspective is important, and the idea comes from Emmanuel Sivan, whom Peters cites in *Jerusalem* but to whom no attribution is made for this context in the present work. The next chapter discusses the Mamluk period, which was so important for the development of the Islamic institutions of the city. Chap. 10 collects travelers' impressions of the Muslim city during the Mamluk period, and the eleventh surveys the Ottoman period to 1800, without fully synthesizing the penetrating social and economic materials developed by Amnon Cohen, K. J. Asali, Haim Gerber, and Butrus Abu-Manneh in their work on Ottoman Jerusalem. The book concludes with an essay called "Jerusalem, A Disputed Inheritance," which brings us to the current dispute over the Holy City.

Despite its flaws, Peters has given us a much needed introduction to the critical question of Islamic Jerusalem. There are many who say that Jerusalem was not important to Muslims until 1967 when they lost it. Peters answers that claim in a sophisticated and trenchant way, showing how political and religious aims are constantly bound up in one another, always within a changing political and religious context, and in the Holy City of Jerusalem, with its architecture of symbols and golden stones of history and faith, this truth has been constant. He says it best in his introduction, "Jerusalem is, in fact our city, all of it in every era, and this book is merely an effort toward helping all of us repossess it."

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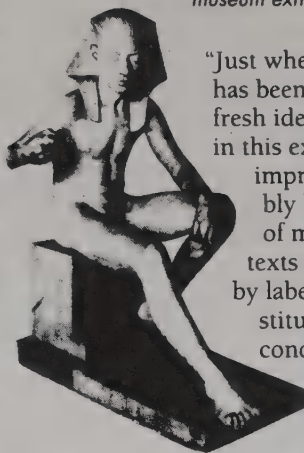
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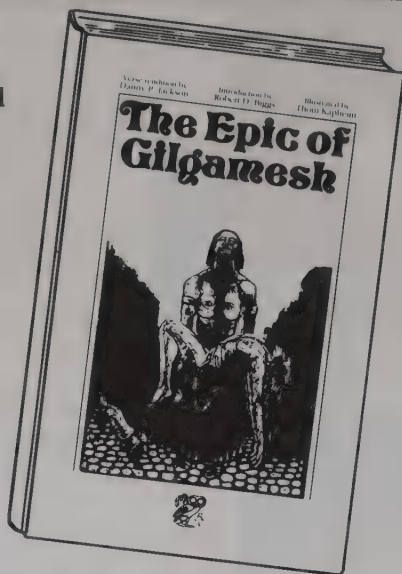
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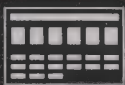
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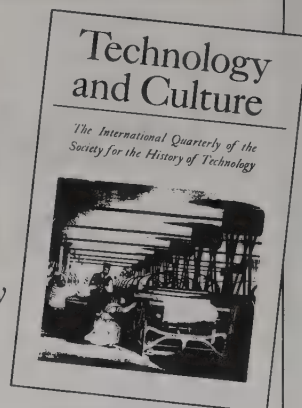


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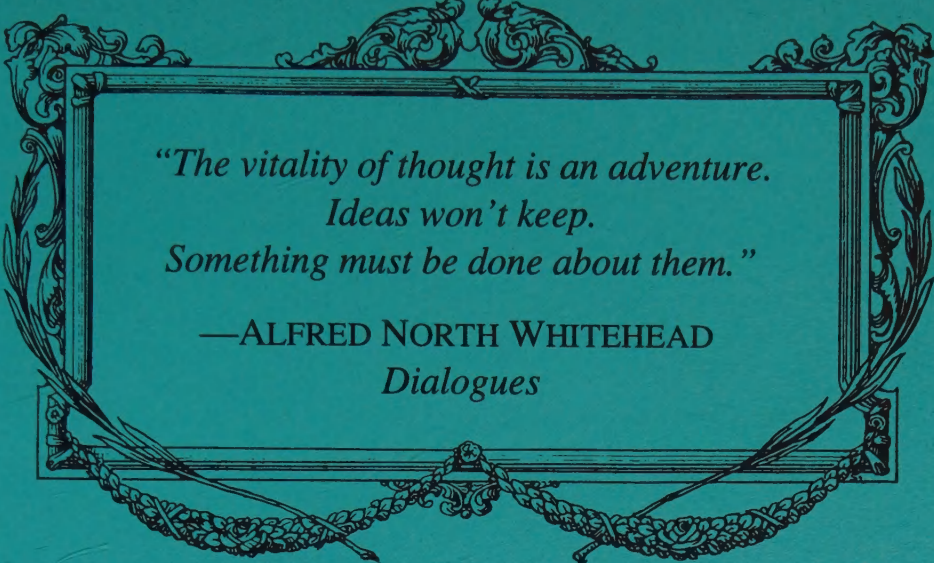
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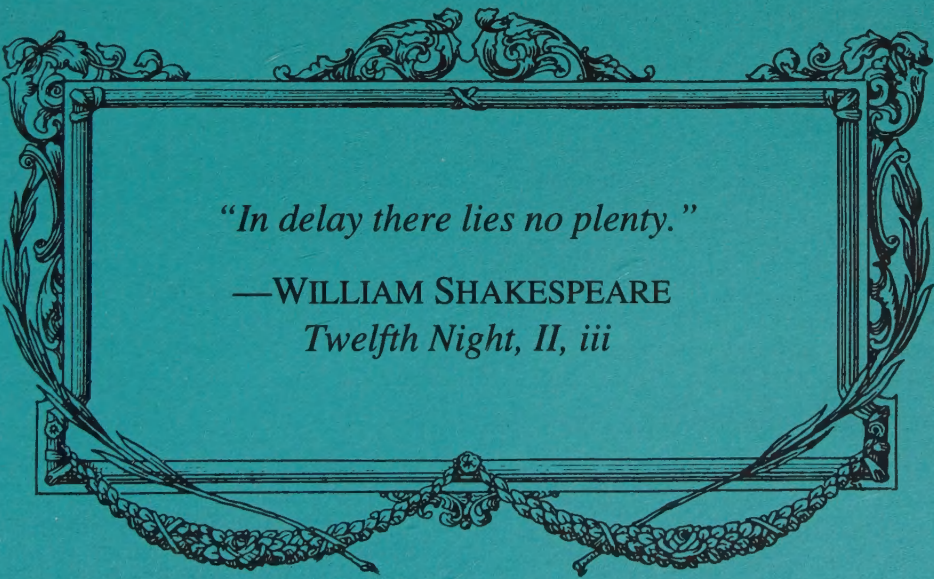
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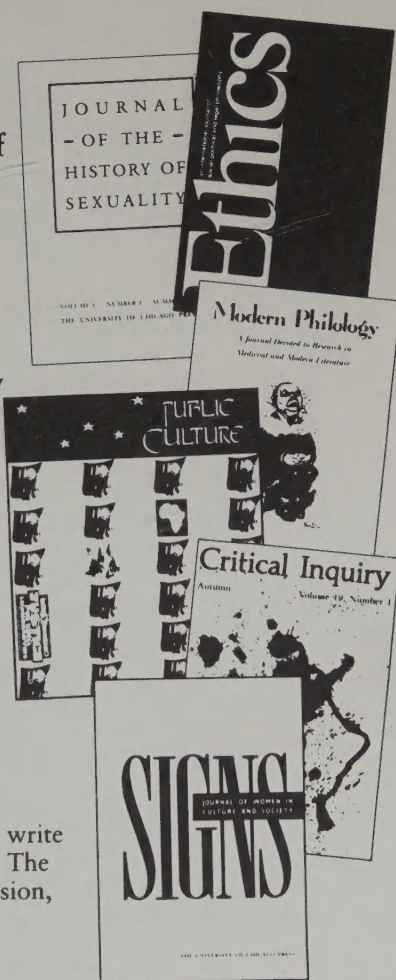
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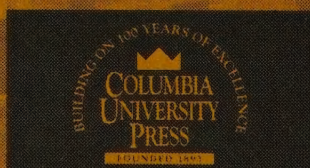
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